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DWP Evaluation: Annual Report 2018

Evaluation of Iowa's redesigned Dental Wellness Plan ("DWP 2.0"): access, quality, and oral health outcomes

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Executive Summary

What are the effects of DWP 2.0 on member access to care?

37% of DWP 2.0 members had a dental visit for any reason in 2018 – a slight decline from 2017.

- 34% of DWP 2.0 members completed the healthy dental behavior (HDB) requirement for an annual dental exam – also slightly lower than the previous year for both members who the previous year were in the Medicaid State Plan (MSP) and DWP 1.0.

- One-third of DWP 2.0 members reported an unmet need for dental care.
    - The most common reason for unmet dental need was trouble finding a dentist (60% of former MSP members and 55% of former DWP 1.0 members).
- Survey respondents reported reduced cost-related barriers to care in DWP 2.0.

What are provider attitudes towards the DWP?

- 70% of dentists reported either "somewhat" or "very" negative perceptions about DWP 2.0.
- Reimbursement levels and broken appointments were the two most common complaints.

What are the effects of the benefit structure – including healthy dental behavior requirements, cost sharing, and reduced benefits – on DWP member outcomes?

- 16% of survey respondents did not know they had dental benefits.
- 65% did not know about the healthy dental behavior requirements.
- 8% were aware that benefits would be reduced if they failed to meet healthy behavior requirements or pay the $3 monthly premium.
- 33% of DWP 2.0 members reported that needed services were not covered
- 36% of DWP 2.0 members reported unmet need for specialty dental care
    - Almost half of survey respondents reported difficulty obtaining an appointment with a dental specialist.
- Members showed low awareness about their dental carrier:
    - 44% did not know who their dental carrier was (i.e. Delta Dental of Iowa or MCNA).

What are the effects of DWP member outreach and referral services?

- 11% of members reported any communication with a service representative; approximately two-thirds of these individuals were reminded to return to their dentist for regular appointments.

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General Background Information

Beginning in May 2014, the Centers for Medicaid and Medicare Services (CMS) approved Iowa's request to offer dental benefits to Iowa Health and Wellness Plan (IHAWP) members through the Dental Wellness Plan (DWP). Originally, DWP offered tiered dental benefits to the state's Medicaid expansion population (ages 19 to 64), whereby members could earn enhanced benefits by returning for regular periodic recall exams every 6-12 months ("DWP 1.0").

Three years later, on May 1, 2017, the State of Iowa proposed a Medicaid State Plan Amendment (SPA), to be effective July 1, 2017.[1] Through this amendment, the DWP was redesigned as an **integrated dental program** for all Medicaid enrollees aged 19 and over. Prior to July 1, 2017, Iowa provided dental benefits to adult enrollees via two different benefit packages and management strategies, which varied by eligibility group (Figure 1). Individuals eligible through the state's Medicaid expansion were enrolled in DWP 1.0. All other Medicaid-enrolled adults received State Plan dental benefits via the traditional, fee-for-service delivery system. With this amendment, the State proposed to offer a single, unified adult dental program ("DWP 2.0") for most adult Medicaid populations. This unified dental program is intended to ensure continuity of care for members as they transition between Medicaid eligibility categories.[2] It should be noted that several adult Medicaid populations still remain excluded from DWP 2.0 and receive dental benefits through the traditional Medicaid State Plan (Figure 1)[3].

Benefit Design

Along with merging dental benefits into a single program, the 1115 waiver amendment also modifies the DWP benefit structure. Originally, the DWP incorporated an earned benefits model. Medicaid enrollees were eligible for the same set of benefits; however, they did not have the same requirements for recall exams. The DWP 2.0 structure (Figure 2) **eliminates the tiered benefits** in response to concerns that too few members had become eligible for Tiers 2 and 3.[4] Comprehensive dental benefits are available to members in the DWP 2.0 during their first year of enrollment (Table 1).[5]

The modified earned benefit structure in DWP 2.0 requires members to complete State designated "**healthy dental behaviors"** annually in order to maintain comprehensive dental benefits after the first year of enrollment (Table 1). Healthy dental behaviors include completion of an oral health self-assessment and a preventive dental visit. Preventive dental services that meet the healthy behaviors requirement are listed in Table 2; these services include routine oral exams and dental cleanings.

[1] Section 1115 Demonstration Amendment. Iowa Wellness Plan. Project #11-W-00289/5. State of Iowa Department of Human Services. May 1, 2017. Available at: https://dhs.iowa.gov/sites/default/files/Iowa_DWP_Draft_1115_Final_05.1.17.pdf. Accessed 8/1/2017.

[2] *Id.* at 6.

[3] *Id.* at 16.

[4] *Id.* at 5.

[5] *Id.* at 8.

Figure 1. Flow diagram showing program eligibility before and after July 1, 2017

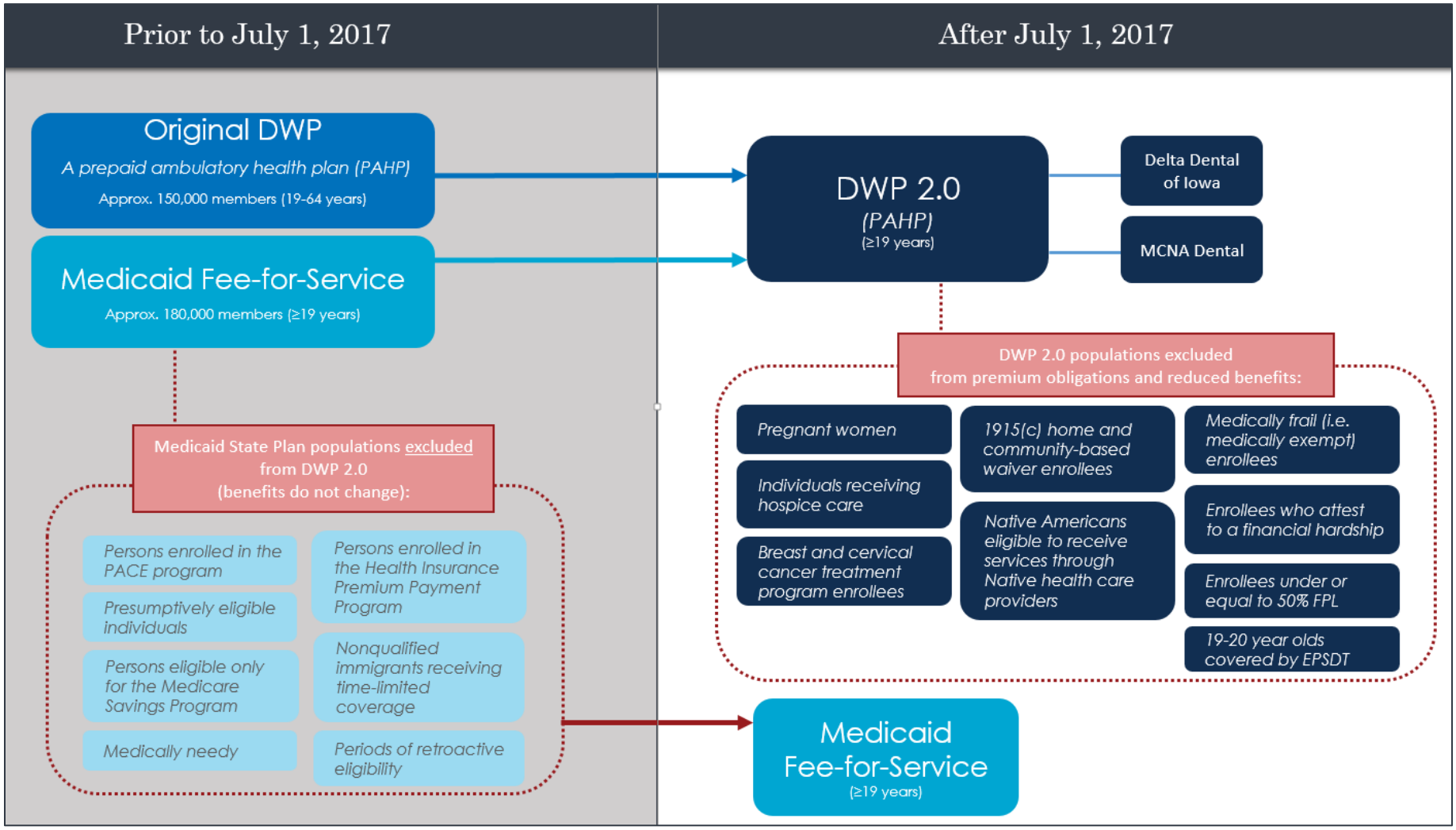


Figure 2. DWP 2.0 benefit structure as of July 2017

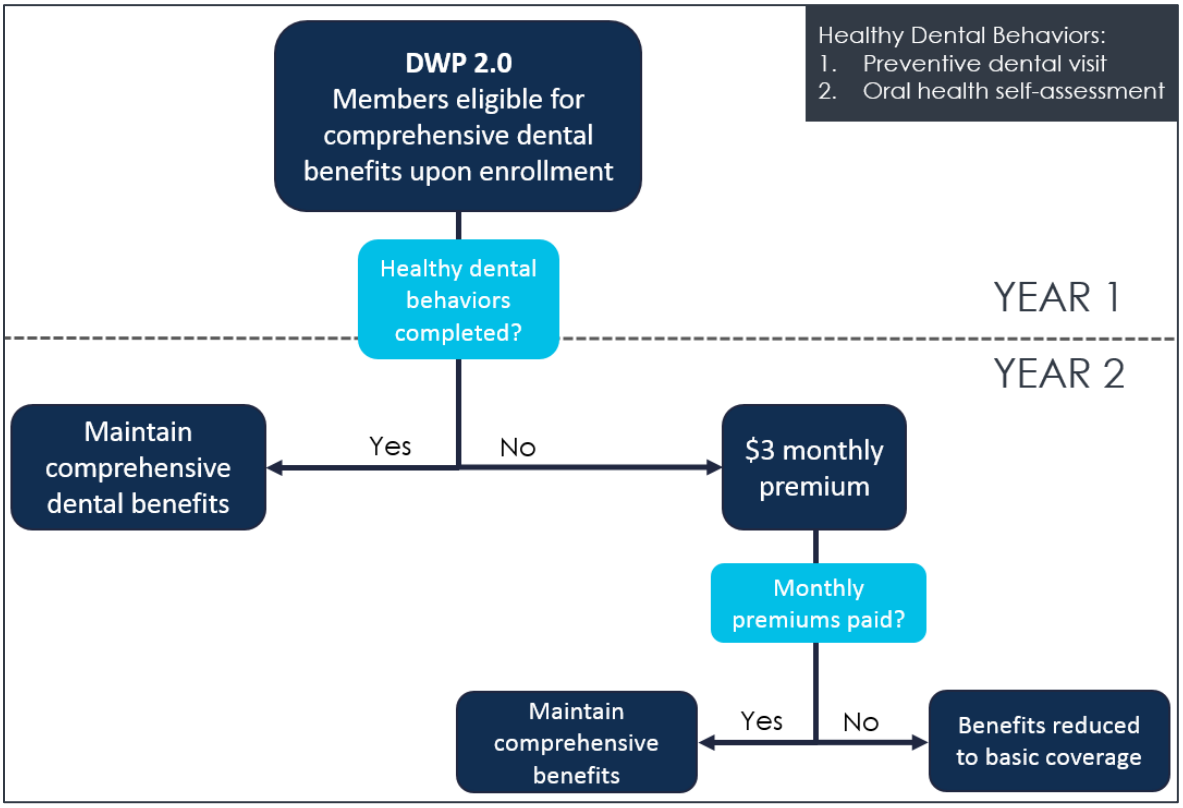


Table 1. Overview of Dental Wellness Plan 2.0 dental benefits available to members during their first year of enrollment

Description
Diagnostic/preventive dental services
Exams and education
Cleanings
Radiographs
Fluoride treatment
Emergency services
Restorative services
Non-surgical periodontal
Endodontic care
Crowns
Tooth replacements
Periodontal surgery

Table 2. Dental Wellness Plan 2.0 preventive services for healthy dental behavior requirements

CDT Code	Description
D0120	Periodic oral evaluation – established patient
D0140	Limited oral evaluation – problem focused
D0150	Comprehensive oral evaluation
D0180	Comprehensive periodontal evaluation
D1110	Prophylaxis (dental cleaning)
D4346	Scaling in presence of generalized moderate or severe gingival inflammation – full mouth
D4910	Periodontal maintenance

Cost Sharing

Previously, adult Medicaid enrollees in the fee-for-service program were responsible for a $3.00 visit copayment; however, there is **no copayment** required for dental services in the DWP 2.0. However, members over 50% of the Federal Poverty Level (FPL) who do not complete the required healthy dental behaviors during their first year of enrollment will have a **premium obligation** beginning in year two. If members fail to make monthly $3.00 premium payments, benefits will be reduced to basic coverage benefits only (Table 3).[6] Certain DWP members (e.g., pregnant women) are **exempted from the premium obligations and reduced benefits** for failure to complete the healthy dental behaviors; exempt populations are listed in Figure 1.[7]

Table 3. Dental Wellness Plan 2.0 basic coverage benefit list

CDT Code	Description
D0140, 0170, 0160	Problem focused evaluations
D0220, 0230, 0330	Periapical and panoramic radiographs
D3220-3222	Pulpal debridement or pulpotomy
D0460	Pulp vitality test
D7140-7250	Extractions and surgical extractions
D7270	Tooth re-implantation and/or splinting
D7285, 7286	Biopsy
D7510, 7511	Incision and drainage of abscess
D9110	Palliative treatment of dental pain
D9223, 9243, 9248	Sedation
D9440	Office visit after regularly scheduled hours

[6]Section 1115 Demonstration Amendment. Iowa Wellness Plan. Project #11-W-00289/5. State of Iowa Department of Human Services. May 1, 2017. Available at: https://dhs.iowa.gov/sites/default/files/Iowa_DWP_Draft_1115_Final_05.1.17.pdf. Accessed 8/1/2017.

[7] *Id.* at 9.

Consistent with the previous Medicaid State Plan and DWP 1.0, there was originally no annual maximum with DWP 2.0. However, beginning September 1, 2018, a $1,000 annual maximum was implemented for the DWP program.

Delivery System

DWP 2.0 benefits are provided by a managed care delivery system via **Prepaid Ambulatory Health Plans** (PAHPs). The State is currently contracted with two PAHPs to deliver DWP benefits: Delta Dental of Iowa and MCNA Dental. Beginning July 1, 2017, all adult Medicaid enrollees were transitioned from the fee-for-service delivery system to one of these two PAHPs; existing Medicaid enrollees were assigned evenly between the two plans. Going forward, newly eligible individuals are also assigned evenly between the two plans. Members have the option to change PAHPs within the first 90 days of enrollment without cause.

Evaluation Questions and Hypotheses

Evaluation Question 1 - What are the effects of DWP 2.0 on member access to care?

Hypothesis 1.1

DWP 2.0 members will have equal or greater access to dental care than either DWP 1.0 or Medicaid State Plan (MSP) members had prior to July 1, 2017. Specific measures to test this hypothesis include:

- Annual dental visit
- Utilization of dental care
- Unmet need for dental care

Hypothesis 1.2

DWP 2.0 members will be more likely to receive preventive dental care than either DWP 1.0 or MSP members were prior to July 1, 2017. Measures include:

- First preventive dental visit

Hypothesis 1.3

DWP 2.0 members will have equal or lower use of emergency department services for non-traumatic dental care than either DWP 1.0 or MSP members had prior to July 1, 2017. Measures include:

- Use of emergency department for non-traumatic dental care
- Access to emergency dental care

Hypothesis 1.4

DWP 2.0 members will have equal or better quality of care than either DWP 1.0 or MSP members did prior to July 1, 2017. Measures include:

- Emergency department use
- Member's rating of dental plan quality
- Proportion of members who had to change regular dentists
- Regular source of dental care
- Experience changing dentists

Hypothesis 1.5

DWP 2.0 members will report equal or greater satisfaction with the dental care provided than DWP 1.0 or MSP members did prior to July 1, 2017. Measures include:

- Rating of regular dentist
- Rating of all dental care received
- Rating of DWP 2.0

Hypothesis 1.6

DWP 2.0 members will report better understanding of their benefits when compared to the DWP 1.0 tiered structure. Measures include:

- Member awareness of healthy dental behavior requirements

Hypothesis 1.7

The earned benefit structure will not be perceived by members as a barrier to care in comparison to DWP 1.0. Measures include:

- Difficulty completing healthy dental behavior requirements
- Member attitude towards healthy dental behavior requirements
- Out-of-pocket dental expenditures
- Member experience with covered benefits.

Evaluation Question 2 - What are provider attitudes towards the DWP?

Hypothesis 2.1

The DWP 2.0 benefit structure will not be perceived by dentists as a barrier to providing care. Measures include:

- Dentist willingness to accept new patients
- Dentist satisfaction with DWP 2.0

Hypothesis 2.2

Over 50% of DWP 2.0 providers will remain in the plan for at least 3 years. Measures include:

- Proportion of long term dental providers (2018 will provide baseline data for this measure)

Evaluation Question 3 - What are the effects of the benefit structure – including healthy behavior requirements, cost sharing, and reduced benefits – on DWP member outcomes?

Hypothesis 3.1

The benefit structure for DWP 2.0 members will increase regular use of recall dental exams over the study period. Measures include:

- Self-reported oral health status
- Member perceived impact of healthy dental behavior requirements

Hypothesis 3.2

The benefit structure will not be seen as a barrier to care by DWP 2.0 members.

- *This hypothesis will be addressed by measures associated with Hypothesis 1.7.*

Hypothesis 3.3

In year 2 of the DWP 2.0 and beyond, use of preventive dental care will be greater than in the first year of the program. This hypothesis will be addressed by measures associated with Hypothesis 3.1.

Hypothesis 3.4

DWP 2.0 policies will promote member compliance with healthy behavior activities. Measures include:

- Member compliance with both healthy behaviors

Evaluation Question 4 - What are the effects of DWP member outreach and referral services?

Hypothesis 4.1

DWP 2.0 member outreach services will address dentists' concerns about missed appointments. Measures include:

- Dentist perceptions of missed appointments
- Member outreach for healthy dental behavior requirements

Hypothesis 4.2

DWP 2.0 member referral services will improve access to specialty care for DWP 2.0 members as compared to MSP members prior to July 1, 2017. Measures include:

- Care from a dental specialist
- Utilization of specialty dental services
- Timeliness of getting an appointment with dental specialist

Hypothesis 4.3

DWP 2.0 member outreach will improve DWP 2.0 members' compliance with follow-up visits, including recall exams, as compared to DWP 1.0 and MSP members.

- *This hypothesis will be evaluated in Year 2 (2019 Annual Report)*

Hypothesis 4.4

DWP 2.0 member outreach will improve members' access to a regular source of dental care. Measures include:

- Members with a regular dentist
- Timeliness of getting a routine dental appointment
- Finding a dentist who accepts DWP insurance

Methods

This evaluation uses a non-equivalent groups design to compare pre-post experiences of members within Iowa Medicaid and the Dental Wellness Plan (DWP). Claims data for FY2017 and FY2018 were analyzed to assess pre-post experiences. Data from the 2017 Consumer Survey and 2017 Dentist Transition Survey were analyzed to assess experiences after DWP 2.0 was implemented. A general overview of data sources and study groups is provided in Figure 3. A key question of this evaluation was how the transition to DWP 2.0 affected access to dental care for former members of the traditional Medicaid State Plan (MSP). Using administrative claims and enrollment data, we examined experiences for adults eligible for Medicaid through the Family Medical Assistance Program (FMAP) pre- and post-implementation. A second question of this evaluation was how the transition to DWP 2.0 affected access for adults who had been in the program prior to the redesign. Using administrative claims and enrollment data, we examined outcomes for adults who had been enrolled in DWP 1.0 for one year prior to the redesign and enrolled in DWP 2.0 for one year after the redesign. Using survey data, we compared experiences of current DWP 2.0 members based on program enrollment prior to DWP 2.0 – either MSP or DWP 1.0. Finally, we examined outcomes for the DWP 2.0 program overall – with no distinctions based on previous enrollment.

Evaluation time periods and comparison groups are described below and summarized in Figure 3.

Evaluation time periods

Pre-DWP 2.0 (prior to July 1, 2017)

- **FY2017, Year 0.** Outcomes using administrative data in this report makes comparisons between Program Year 1 and the one-year period immediately preceding implementation of DWP 2.0. This period spans FY2017 (July 2016 – June 2017).

Post-DWP 2.0 (after July 1, 2017)

- **FY2018, Year 1.** This report evaluates administrative outcomes one year after implementation of the redesigned DWP. This one-year period spans FY2018 (July 2017 – June 2018).
- Survey data from the 2018 Consumer Survey provide information about member experiences after implementation of DWP 2.0
- Survey data from the Fall 2017 Dentist Transition Survey provide information about member experiences after implementation of DWP 2.0. Comparisons are made based on program enrollment prior to DWP 2.0.

Some outcomes in this evaluation uses slightly modified time periods for pre- and post-comparisons due to limited data availability (e.g., emergency department visits).

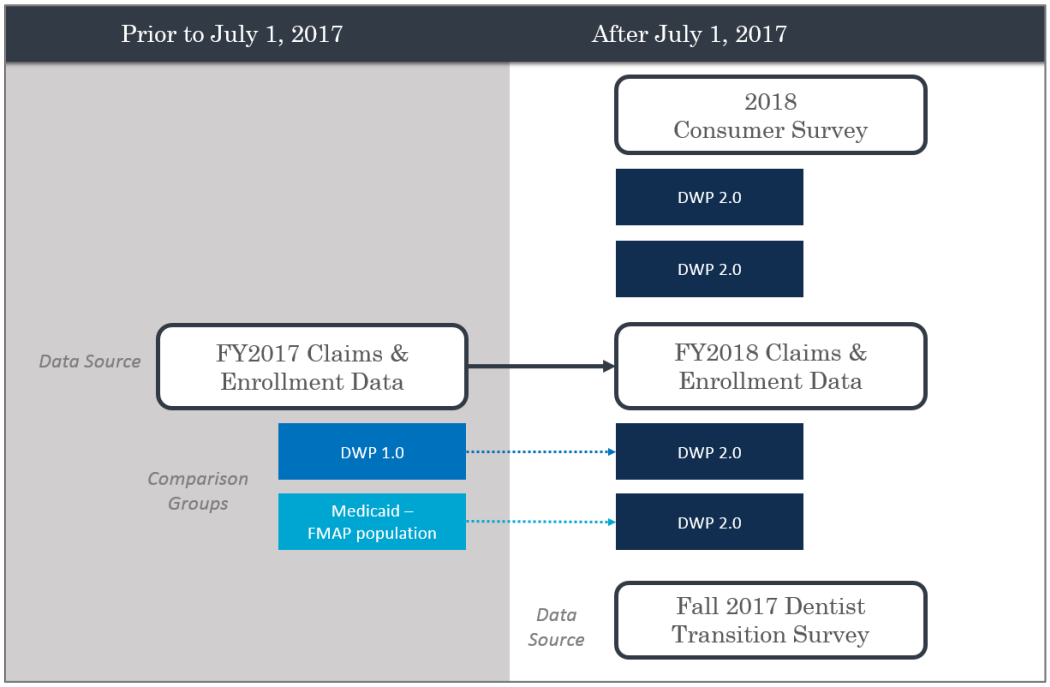
Description of study groups

DWP 2.0 members – FY2018, Program Year 1. In this Year 1 evaluation, this study group will be composed of all DWP 2.0 members who were previously enrolled in DWP 1.0 or the MSP via FMAP eligibility. Outcomes for the Supplemental Security Income (SSI) population have also been produced; these are available in Appendix A.

DWP 1.0 members – FY2017, comparison group. In this Year 1 evaluation, this first comparison group is composed of DWP 1.0 members enrolled during the 12 months immediately preceding implementation of DWP 2.0 (July 31, 2016 – June 30, 2017).

MSP members – FY2017, comparison group. All members of the MSP one year prior to DWP 2.0 implementation are part of the MSP comparison group for this current evaluation.

Figure 3. Pre-post data sources and study groups



Data sources

2018 Consumer Survey

We compared member self-reported utilization and perceptions of care between member groups in DWP 2.0. The 2018 survey included items modified from the DWP consumer surveys administered in 2015[8] and 2016[9].

In 2018, paper surveys were mailed and respondents were given the option to complete the survey online. The sampling frame for the survey included current DWP 2.0 members who had been enrolled in their current plan for at least the previous 6 months, as well as enrolled in the previous plan (DWP 1.0 or fee-for-service Medicaid) for at least 6 months prior to DWP 2.0 implementation. We included random samples of 3000 members from each of six member groups based on previous and current plan enrollment. Sample frame sizes and response rates are shown in Table 4. The two main comparison groups for the purposes of this report are former DWP 1.0 members (rows A & B in Table 4) and former income-eligible MSP members (rows C & D). However, overall figure proportions for survey measures include SSI members (rows E & F) as well, and information for this subgroup is available in Appendix A.

[8] Reynolds JC, Damiano PC, McKernan SC, et al. Evaluation of the Dental Wellness Plan: Member Experiences in the First Year. September 2015. University of Iowa Public Policy Center; Iowa City, IA. Available at: http://ppc.uiowa.edu/publications/evaluation-dental-wellness-plan-member-experiences-first-year.

[9] Reynolds JC, McKernan SC, Damiano PC, et al. Evaluation of the Dental Wellness Plan: Member Experiences after Two Years. August 2017. University of Iowa Public Policy Center; Iowa City, IA. Available at: http://ppc.uiowa.edu/publications/evaluation-dental-wellness-plan-member-experiences-after-two-years

Table 4. Sample frame and response rates for 2018 DWP 2.0 consumer survey groups

Group	Dental program enrollment pre-DWP 2.0	Current eligibility determination (Jan 2018)	Current dental carrier enrollment (Jan 2018)	Sampling frame	Adjusted sample size	Total complete	Adjusted response rate (%)
A	DWP 1.0	Income-based	MCNA	12,901	2501	498	20%
B	DWP 1.0	Income-based	DDIA	74,421	2729	924	34%
C	Medicaid FFS	Income-based	MCNA	8,673	2672	486	18%
D	Medicaid FFS	Income-based	DDIA	12,067	2704	573	21%
E	Medicaid FFS	Disability (SSI)	MCNA	10,801	2538	654	26%
F	Medicaid FFS	Disability (SSI)	DDIA	14,985	2635	842	32%

2017 Iowa Dentist Transition Survey

In 2017, private practice dentists in Iowa were surveyed using a modified instrument from previous DWP evaluations[10] to assess changes in dentists' attitudes about the DWP, knowledge about DWP 2.0, and changes in participation. Comparisons will be made between the 2017 survey and previous surveys, where comparable data are available.

We solicited dentists' experiences through an online survey that was distributed to all private practice dentists in Iowa in December 2017, 6 months after these programmatic changes were implemented. 305 (21%) dentists responded to the survey.

2017 and 2018 Claims and Enrollment Data

The evaluation will use encounter and enrollment data to evaluate administrative outcomes. Administrative outcomes paralleling those used in the previous DWP evaluation[11] are calculated in order to allow for pre-post program comparisons.

Analytic methods

Means testing

Bivariate analyses will be used to compare simple rates for claims-based outcomes such as utilization of preventive care across member groups over time. Bivariate analyses are also most commonly used to test differences between member groups on survey responses, as the number of respondents in these groups are rarely large enough to allow more complex tests such as ANOVA or regression modelling.

[10]Reynolds JC, Damiano PC, McKernan SC, et al. Evaluation of the Dental Wellness Plan: Private Practice Dentist Experiences in the First Year. March 2016. University of Iowa Public Policy Center; Iowa City, IA. Available at: http://ppc.uiowa.edu/publications/evaluation-dental-wellness-plan-private-practice-dentist-experiences-first-year

[11] McKernan SC, Momany ET, Ingleshwar A, et al. Access, Utilization, and Cost Outcomes: Iowa Dental Wellness Plan Evaluation 2014-2016. March 2017. University of Iowa Public Policy Center; Iowa City, IA. Available at: http://ppc.uiowa.edu/publications/access-utilization-and-cost-outcomes-iowa-dental-wellness-plan-evaluation-2014-2016.

Multivariate modelling

Multivariate modelling is particularly useful to determine whether the dental plan/program has an effect on member utilization of care while controlling for other factors such as age, gender, location, and plan characteristics. We will utilize Difference-in-Differences (DID) as it is designed to answer questions related to change at a particularly point in time. A large group of DWP 1.0 and MSP members were shifted to the DWP 2.0 program on May 1, 2017, providing a clear cut point for before and after difference comparisons.

Models adjust for variables in order to control for differences that may affect utilization of dental services such as age, race, percent poverty, county urbanicity, and length of enrollment. Indicators for Year 1 and Year 0 are the DID terms.

Study Population and Comparison Group

The DID approach is used to study causal relationships. It uses a treatment group which is exposed to the policy change and a control group which is not exposed to the change and compare outcomes after and before the change are compared between the treatment group and the control group. This approach can adjust permanent differences between the treatment and control group and remove biases from comparisons over time in the treatment group that could be the result of trends due to other cause of the outcome.

For our analysis, the treatment group consists of members who were in DWP 1.0 or MSP for at least 11 month during the pre-DWP 2.0 period and in DWP 2.0 for at least 11 month during the post-DWP 2.0 period. The control group consisted of members who were in MSP for at least 11 month during the pre-DWP 2.0 period and then transitioned to DWP 2.0, with at least 11 months of enrollment in that program. We excluded individuals without enrollment in both the pre- and post-implementation periods.

Regression Modeling

We used the following model to estimate the effect of the new integrated dental program (DWP 2.0) among the treatment group:

$$Outcome_{it} = \beta_0 + \beta_1 Group_i * Post_t + \beta_2 Group_i + \beta_3 Post_t + \Gamma X_{it} + \epsilon_{it}$$

where $Outcome_{it}$ are binary indicators for whether a member had an annual dental visit and whether a member had a preventive dental visit during the time periods (Pre-DWP2.0 and Post-DWP2.0). $Group_i$ is a dummy variable indicating whether the individual is in the treatment group. The main coefficient of interest is β_1 which estimates the effect of the new dental program. It captures the mean changes in outcome (e.g., annual dental visits or preventive dental visit) among the treatment group after the intervention. $Post_t$ is an indicator variable for observations after the new united dental program has taken effect on July 2017. X_{it} is a vector of personal characteristics for a member. The controls are age, gender, race (white, black, Hispanic, other race, and unknown), rurality of residence (based on rural-urban continuum codes), whether a member had a medical well visit in the pre-DWP period, whether a member is eligible for premiums (whose income above 50% of FPL), MCO group (Amerigroup, AmeriHealth, UHC, and non MCO), and whether a member lives in HPSA.

Limitations

This report does not include comparisons between the 2016 and 2018 Consumer Surveys. After comparing sampling frames and response rates, it was determined that the two groups of respondents were too dissimilar – based on length of enrollment and response rates by program plan (i.e. Delta Dental of Iowa and MCNA Dental) to make valid comparisons. Specifically, MCNA members were over-sampled for the 2018 survey (in order to receive enough responses from this population); this program is therefore over-represented among 2018 respondents. The 2018 sampling frame also targeted members with at least 6 months pre- and 6 months post- DWP 2.0 implementation. By comparison, the 2016 sampling frame only required 6 months of eligibility. The next consumer survey (scheduled for fall 2019) will utilize a sampling frame like the 2018 survey, in order to facilitate comparisons over time.

The provider survey asked dentists to provide information about pre-post knowledge and attitudes; their responses may suffer from recall bias or social desirability bias. Finally, the DWP redesign affected many aspects of the dental program: reimbursement levels were reduced, member benefits were changed, new populations were moved into the program, and administration of benefits shifted heavily to new dental carriers. We have considered many of these changes specifically in this evaluation, but it is challenging to identify specific levers for any observed changes.

Results

Evaluation Question 1 - What are the effects of DWP 2.0 on member access to care?

Hypothesis 1.1 DWP 2.0 members will have equal or greater access to dental care than either DWP 1.0 or Medicaid State Plan (MSP) members had prior to July 1, 2017.

This hypothesis examines overall access to dental care using self-reported member survey data and administrative data. To test this hypothesis, we considered:

1. What proportion of members had an annual dental visit based on administrative data
2. Whether the member reported having a recent dental visit
3. What proportion of members reported unmet need for dental care

Dental utilization

Overall, dental utilization (based on claims analysis) decreased slightly after implementation of DWP 2.0 with only 35% of Medicaid members and 37% of DWP members having a dental visit for any reason after implementation of DWP 2.0 as compared to 39% and 40%, respectively, in the year prior to implementation of DWP 2.0 (Figure 4). The 2018 Consumer Survey shows comparable rates of self-reported recent dental utilization among former MSP and former DWP 1.0 members (57-58%) (Figure 5).

Figure 4. Members with any dental visit by year, 2017 vs. 2018 (claims-based)

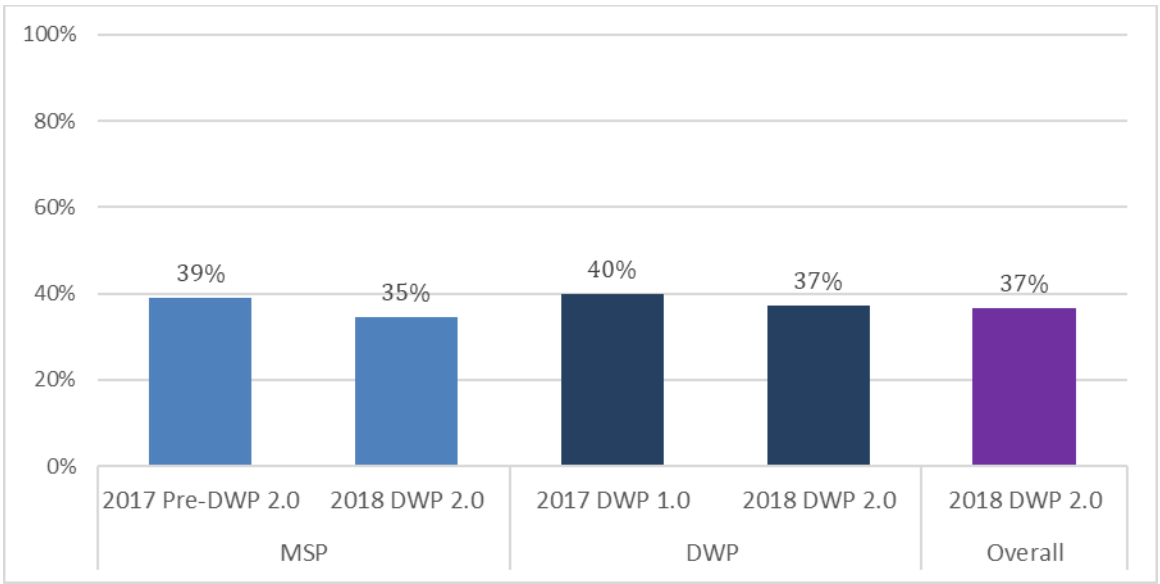
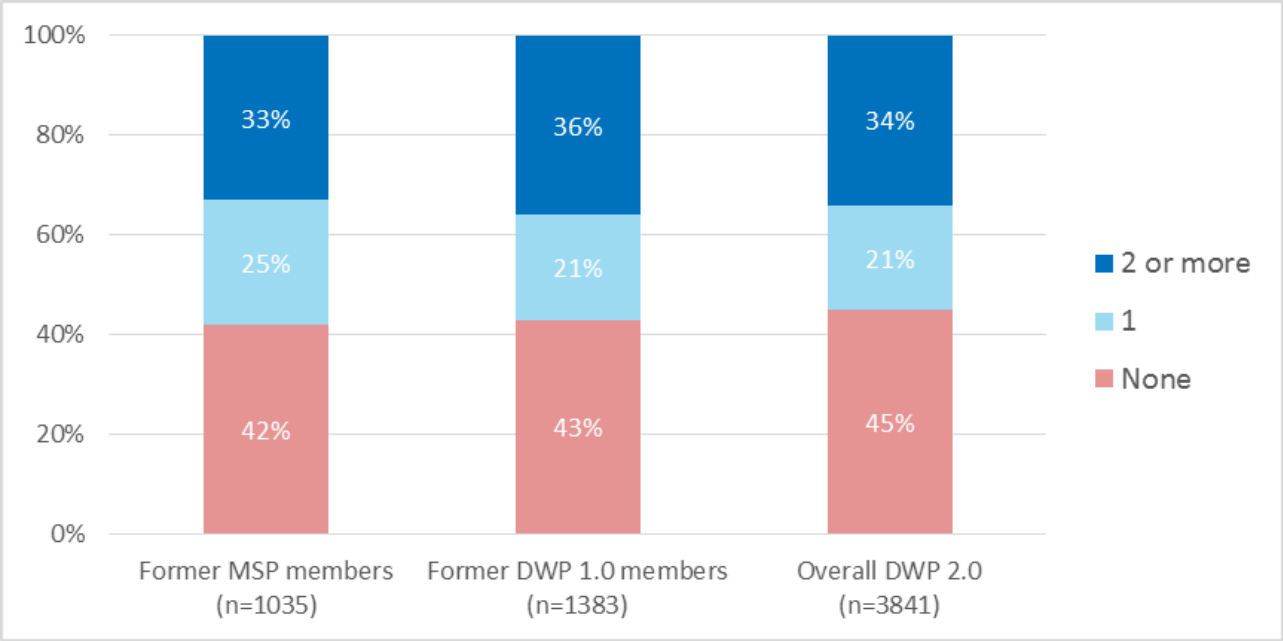


Figure 5. Self-reported recent* dental visit, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

DID results: Dental utilization-any visit

The outcome variable is a binary indicator which captures whether a member had any dental visit or not. After to the DWP redesign in July 2017, members showed a statistically significant 3.5 percentage points decrease in the probability of having any dental visit (Post-DWP 2.0 Coefficient = -.035) (Table 5). Despite this overall decrease, members who were previously enrolled in DWP 1.0 were 3.9 percentage points more likely than former MSP members to have any dental visit (Post x Treatment Group Coefficient = .039).

The interpretation of these results is that (1) the DWP redesign resulted in a net decrease in rates of dental visits among all members, and that (2) the redesign affected previous MSP and DWP 1.0 members differentially, with DWP 1.0 members showing higher rates of dental utilization relative to the MSP population.

Table 5. Difference-in-difference model predicting any dental visit before and after DWP 2.0 implementation

	Coefficient	95% CI	
Post-DWP 2.0	-0.035***	-0.043	-0.026
Treatment Group	0.019***	0.011	0.027
Post × Treatment Group	0.039***	0.029	0.049
Well person visit (=1)	0.100***	0.095	0.106
Male	-0.058***	-0.063	-0.053
Age	0.000***	0.000	0.001
Non-metro rural	-0.024***	-0.035	-0.013
Non-metro urban	-0.029***	-0.034	-0.023
Black	-0.020***	-0.029	-0.011
Hispanic	0.022***	0.011	0.033
Other race	0.016**	0.005	0.028
Unknown race	0.011**	0.004	0.018
Amerigroup	0.101***	0.085	0.117
AmeriHealth	0.121***	0.105	0.138
UHC	0.106***	0.091	0.122
Income above 50% of FPL	0.052***	0.046	0.057
HPSA	-0.008**	-0.014	-0.002
Constant	0.272***	0.254	0.290

* p<0.05, ** p<0.01, ***p<0.001

Treatment group = DWP 1.0 enrollment pre-July 2017; DWP 2.0 post-July 2017

Control group = MSP enrollment pre-July 2017; DWP 2.0 post-July 2017

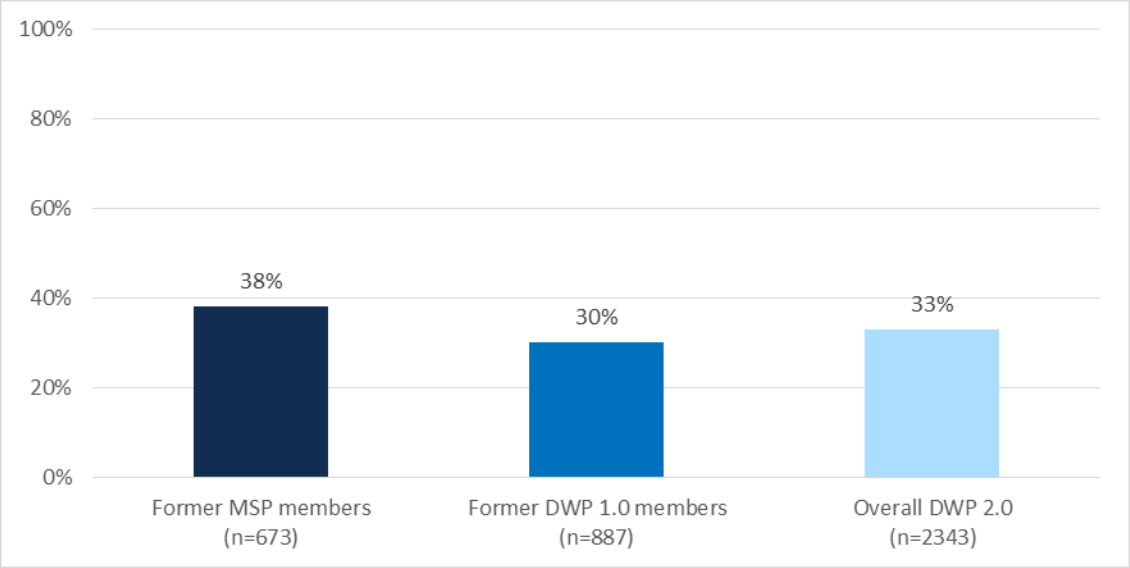
Unmet need for dental care

In 2018, a greater proportion of DWP 2.0 members previously in MSP reported recent unmet dental need compared to former DWP 1.0 members (38% vs. 30%) (Figure 6).

The **types of services needed** were similar across the two population groups. In 2018, 'check-up and cleaning' was the most common type of unmet need among both groups (43-47%); followed by unmet need for 'fillings' among former MSP members (37%) and unmet need for 'extractions' (31%) among former DWP 1.0 members (Table 6).

The most commonly cited **reason for unmet need** among both populations was trouble *finding a dentist who accepted their insurance* (60% among former MSP members and 55% among former DWP 1.0 members) (Table 7). The second most common reason was *care not being covered by insurance* (33% among former MSP members, 38% among former DWP 1.0 members). Notably, unmet need due to *cost* was considerably greater among former DWP 1.0 members (37%) compared to former MSP members (27%) (Table 7).

Figure 6. Self-reported recent* unmet dental need, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Table 6. Unmet need for dental services, 2018 Consumer Survey*

Type of care needed	Former MSP members (n=499)	Former DWP 1.0 members (n=462)	Overall DWP 2.0 (n=1383)
Checkup and cleaning	47%	43%	42%
Extractions	34%	31%	34%
Fillings	37%	30%	32%
Tooth replacements, such as bridges or partial dentures	22%	24%	22%
Crowns/Caps	21%	22%	19%
Full dentures	12%	16%	19%
Root canal or other emergency dental care	20%	14%	16%
Other treatment	9%	6%	7%

*Reported proportions include only those who indicated they had an unmet dental need.

Table 7. Reasons for unmet need for dental care, 2018 Consumer Surveys*

Reason	Former MSP members (n=504)	Former DWP 1.0 members (n=492)	Overall DWP 2.0 (n=1491)
Trouble finding a dentist who accepted my insurance	60%	55%	55%
Care I needed was not covered by my insurance	33%	38%	33%
Could not afford it	27%	37%	30%
Had to travel too far or other transportation problems	28%	23%	29%
Trouble getting an appointment with a dentist for a reason other than not accepting my insurance	20%	15%	20%
Fear or anxiety	20%	12%	18%
Didn't know where to go at night or on the weekend for care	9%	11%	10%
Other reason	6%	5%	6%
Could not get off work	5%	7%	5%

*Reported proportions include only those who indicated they had an unmet dental need.

Overall hypothesis summary

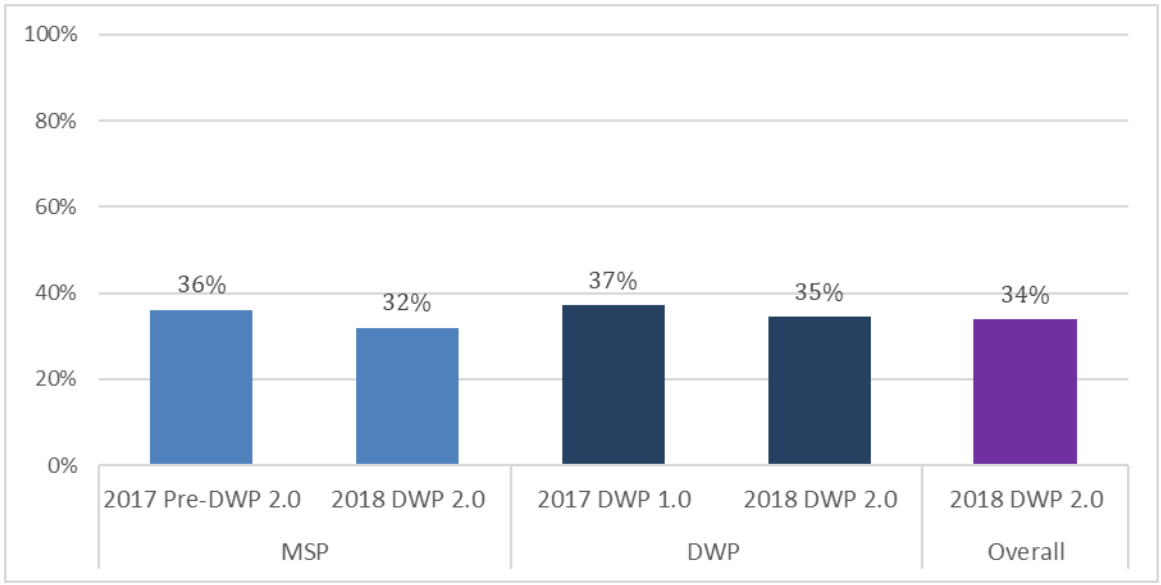
Claims data indicate that dental utilization decreased slightly after implementation of DWP 2.0, with 37% of members having a visit for any reason in FY2018, decreased from 40% in FY2017. Multivariate modeling indicates that this decrease affected previous MSP members more than former DWP 1.0 members. Members report difficulty finding a provider during this time as the primary reason for unmet dental need.

Hypothesis 1.2 DWP 2.0 members will be more likely to receive preventive dental care than either DWP 1.0 or MSP members were prior to July 1, 2017.

This hypothesis examines use of preventive dental services vis-á-vis completion of the healthy dental behavior (HDB) requirement for an annual dental exam. We compared proportion of members who completed this HDB requirement with proportion of members who completed a routine dental exam during FY2017 – 1 year prior to implementation of DWP 2.0.

Both former MSP and former DWP 1.0 members show a decrease in the likelihood of completing a preventive dental visit (defined using DWP 2.0 criteria) after implementation of DWP 2.0 (Figure 7).

Figure 7. Healthy dental behavior (HDB) – completion of preventive dental visit (claims-based)



DID results: Preventive dental visit

The outcome variable is a binary variable which captures whether a member had any preventive dental visit (as defined using DWP 2.0 HDB criteria). The DID model (Table 8) indicated that all members showed a statistically significant 3.2% decrease in the probability of having a preventive dental visit (Post-DWP 2.0 Coefficient = -.032). Despite this overall decline, members who were previously enrolled in DWP 1.0 were 2.9% more likely than former MSP members to have a preventive dental visit (Post x Treatment Group Coefficient = .029).

This relationship was also seen in the pre-implementation period; DWP 1.0 members were more likely to have received a preventive dental visit than MSP members (Treatment Group Coefficient = .023).

Table 8. Difference-in-difference model predicting a preventive dental visit before and after DWP 2.0 implementation

	Coefficient	95% CI	
Post-DWP 2.0	-0.032***	-0.040	-0.023
Treatment Group	0.023***	0.016	0.031
Post × Treatment Group	0.029***	0.019	0.039
Well person visit (=1)	0.100***	0.095	0.106
Male	-0.056***	-0.061	-0.051
Age	0.000*	0.000	0.000
Non-metro rural	-0.021***	-0.032	-0.010
Non-metro urban	-0.023***	-0.029	-0.018
Black	-0.018***	-0.027	-0.009
Hispanic	0.024***	0.013	0.035
Other race	0.020***	0.009	0.031
Unknown race	0.013***	0.006	0.020
Amerigroup	0.096***	0.080	0.111
AmeriHealth	0.118***	0.102	0.134
UHC	0.102***	0.086	0.117
Income above 50% of FPL	0.056***	0.051	0.062
HPSA	-0.007*	-0.013	-0.002
Constant	0.251***	0.233	0.269

* p<0.05, ** p<0.01, ***p<0.001

Treatment group = DWP 1.0 enrollment pre-July 2017; DWP 2.0 post-July 2017

Control group = MSP enrollment pre-July 2017; DWP 2.0 post-July 2017

Overall hypothesis summary

DWP 2.0 members were slightly less likely to receive a preventive dental visit (as defined by program criteria for healthy dental behaviors) in 2018 compared to pre-DWP 2.0 implementation. Relative to former MSP members, DWP 1.0 members were more likely to have received a preventive dental visit in 2018.

Hypothesis 1.3 DWP 2.0 members will have equal or lower use of emergency department services for non-traumatic dental care than either DWP 1.0 or MSP members had prior to July 1, 2017.

This hypothesis examines access to emergency dental services using administrative data and self-reported member survey data. To test this hypothesis, we considered:

1. What proportion of members had an emergency department (ED) visit for non-traumatic dental reasons
2. Rate of ED visits for non-traumatic dental reasons per 1,000 member months
3. What proportion of members with an ED visit visited a dentist for treatment within 7 and 30 days following the ED visit
4. Members' self-reported ability to see a dentist right away in cases of emergencies, and reported waiting times for emergency dental care

Rates of ED visits for non-traumatic dental reasons

The proportion of unique members with an ED visit for non-traumatic dental reasons (Figure 8) was lower for both groups in FY 2018 than it was in FY 2017. This may indicate greater ability to access primary oral health care; however, two years do not provide enough data for trend analyses. In addition, the number of members with an ED visit for non-traumatic dental reasons is quite low, therefore, a slight change in the numbers may move the proportion down without reflecting a lasting change in utilization.

Figure 8. Members with an emergency department (ED) visit for non-traumatic dental reasons

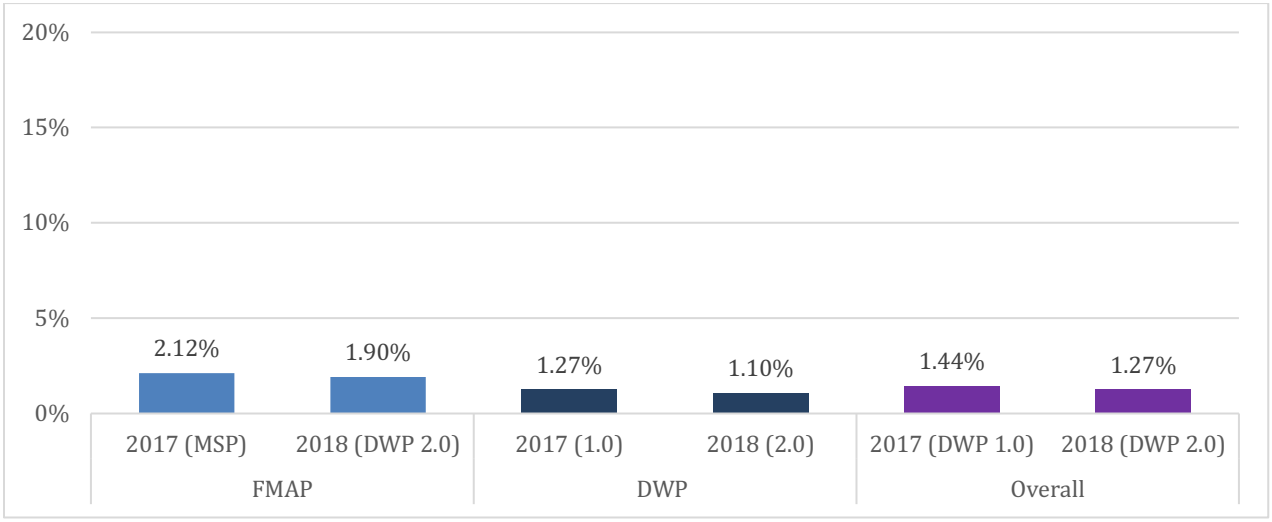


Table 9 provides the rates of dental ED visits for non-traumatic dental reasons for former MSP members and DWP 1.0 members for the two years of the study, expressed as the number of ED visits per 1,000 months of member eligibility. The rates of ED visits dropped from FY 2017 to FY 2018 for both groups in both age groups.

Table 9. Rates of dental emergency department visits for non-traumatic dental reasons

	Former MSP members		Former DWP 1.0 members		Overall DWP 2.0	
	2017 MSP	2018 DWP 2.0	2017 DWP 1.0	2018 DWP 2.0	2017 Pre-DWP 2.0	2018 DWP 2.0
19-44 years of age						
Eligible months	269,126	302,221	716,704	824,113	985,830	1,126,334
Number of visits	583	579	1,098	994	1,681	1,573
Visits/1000 months	2.17	1.92	1.53	1.21	1.71	1.40
% change		-11.5%		-20.9%		-18.1%
45-64 years of age						
Eligible months	39,554	45,330	458,254	489,731	497,808	535,061
Number of visits	35	37	298	304	333	341
Visits/1000 months	0.88	0.82	0.65	0.62	0.67	0.64
% change		-6.8%		-4.6%		-4.5%

Follow up with dentist after ED visit

The rates for follow-up visits with a dentist within 7 days and 30 days declined from one year to the next for all groups (Table 10). These findings seem somewhat contradictory as it is expected that ED rates fall due to increased access to primary oral health care, which should also be reflected in increased rates of ED follow-up. Without further investigation, it is difficult to determine what has led to these results.

Table 10. Rates of follow-up dental visits within 7 and 30 days after emergency department visit for non-traumatic dental reasons

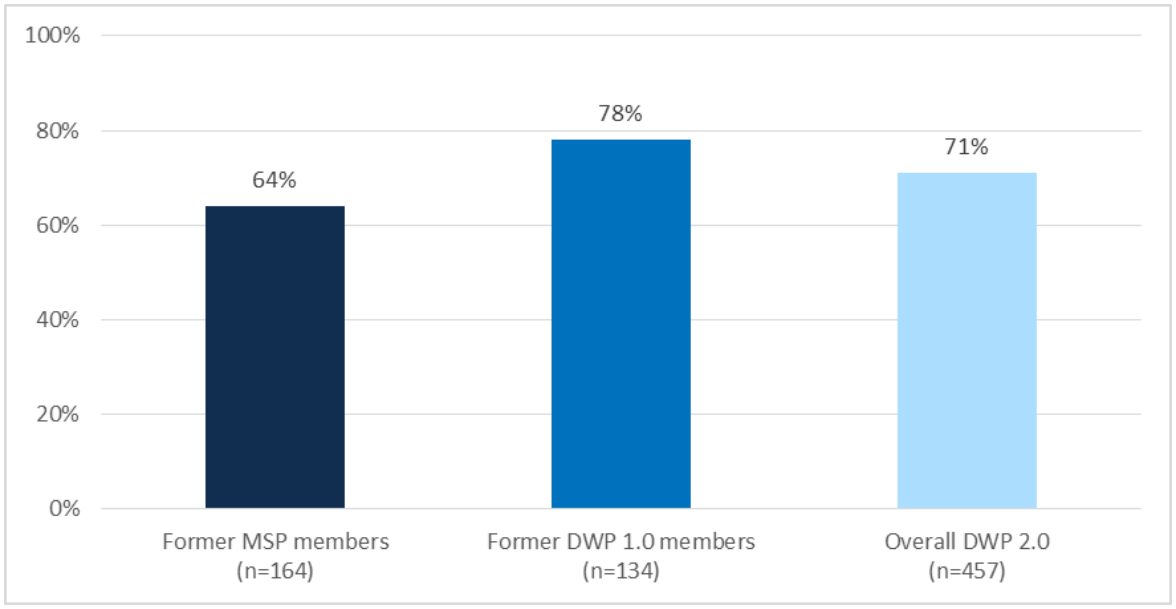
	Former MSP members		Former DWP 1.0 members		Overall DWP 2.0 members	
	2017 MSP	2018 DWP 2.0	2017 DWP 1.0	2018 DWP 2.0	2017	2018
Eligible months	308,680	347,551	1,174,958	1,313,844	1,483,638	1,661,395
Number of ED visits	618	616	1,396	1,298	2,014	1,914
ED visits/1000 months	2.00	1.77	1.19	0.99	1.36	1.15
Follow-up within:						
7 days	26%	19%	24%	22%	25%	21%
30 days	39%	31%	37%	35%	38%	34%

Timely access to a dentist for emergency care

In 2018, 7 in 10 DWP 2.0 members received **emergency dental care** as soon as wanted (Figure 9). These rates were greater for former DWP 1.0 members compared to former MSP members (78% vs. 64%).

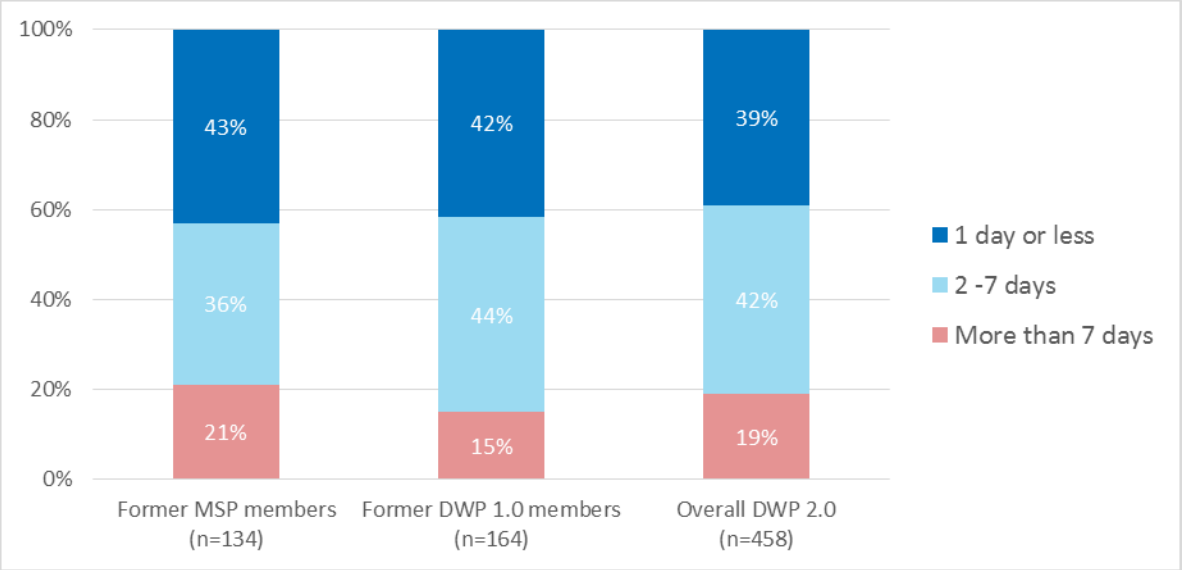
Additionally, in 2018, approximately 1 in 5 DWP 2.0 members with a dental emergency had to wait more than 7 days for emergency care in a dental office (Figure 10).

Figure 9. Appointment for recent* emergency dental care as soon as wanted, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Figure 10. Reported waiting times for emergency dental care in a dental office, 2018 DWP Consumer Survey



Overall hypothesis summary

Claims analysis shows that rates of ED use for non-traumatic dental conditions decreased after implementation of DWP 2.0. However, rates of follow-up with a dentist after an ED visit decreased. This may be partially explained by the fact that 36% of former MSP members with a dental emergency were not able to get care in a dental office as soon as desired, along with the aforementioned finding that finding a dentist that takes DWP 2.0 was the most common reason for unmet dental need.

Hypothesis 1.4 DWP 2.0 members will have equal or better quality of care than either DWP 1.0 or MSP members did prior to July 1, 2017.

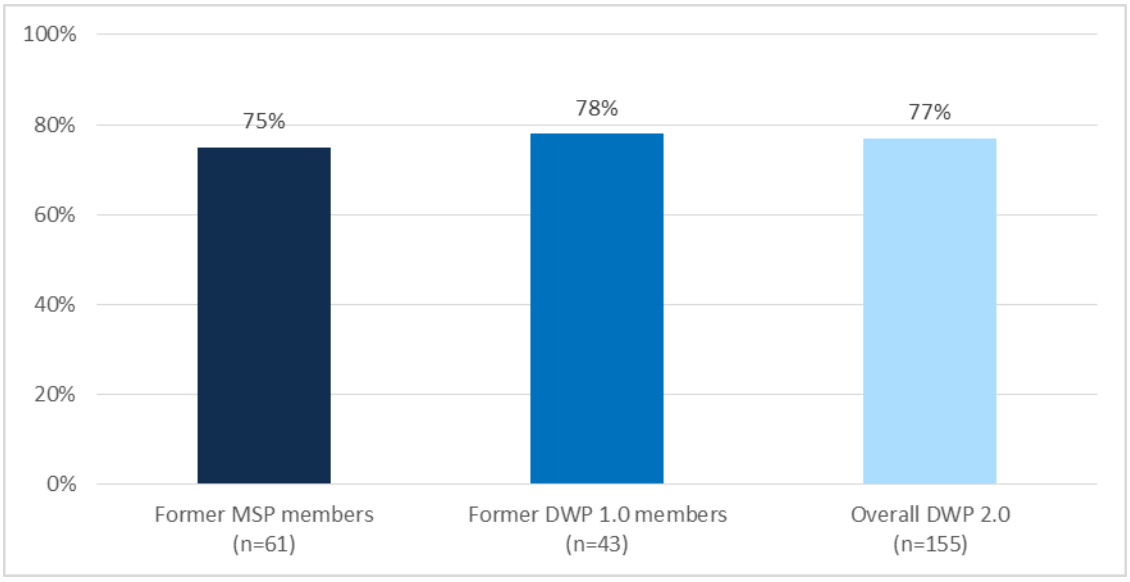
Due to our inability to compare the survey results from 2016 and 2018, this hypothesis has been changed to "DWP 2.0 members will report moderate to high quality of care". This hypothesis examines several indicators of self-reported quality of care, based on member survey data. To test this hypothesis, we considered:

1. What proportion of members felt that the care they received at a recent ED visit could have been provided in a dental office, if one was available to them
2. Overall rating of the dental plan
3. What proportion of members would recommend their dental plan to others
4. What proportion of members had to switch regular dentists when they switched plans
5. What proportion of members currently have a regular dentist
6. Member experiences finding a new dentist

Avoidable ED dental visits

In 2018, among DWP 2.0 members who received dental care in an emergency department, 77% believed it **could have been provided at a dentist's office** if one was available at the time. These rates were similar across both DWP 2.0 population groups (Figure 11).

Figure 11. Care at most recent* ED visit could have been provided in a dentist's office, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Member satisfaction with plan

Overall, DWP 2.0 members were equally likely to give their plan a high rating (rating of 9-10) as a low rating (rating of 0-6) (Figure 12). However, a greater proportion of former DWP 1.0 members gave their

plan a 9-10 rating compared to former MSP members (40% vs. 30%). More than 8 in 10 members of both groups would recommend their plan to others (Figure 13).

Figure 12. Rating (0-10, 10=best) of dental plan, 2018 DWP Consumer Survey

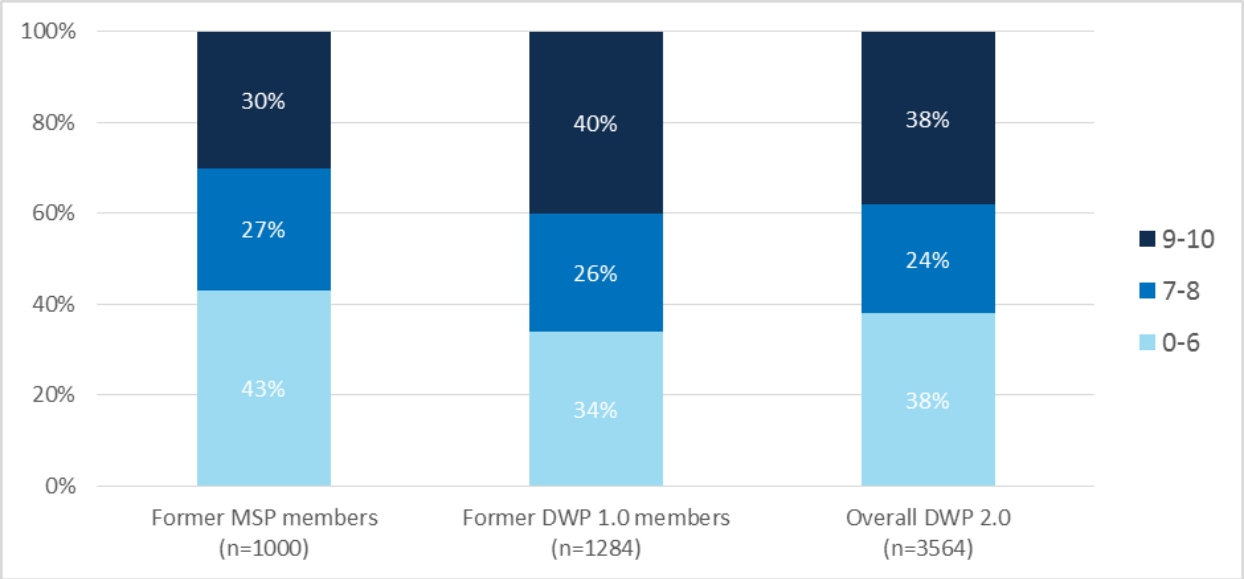
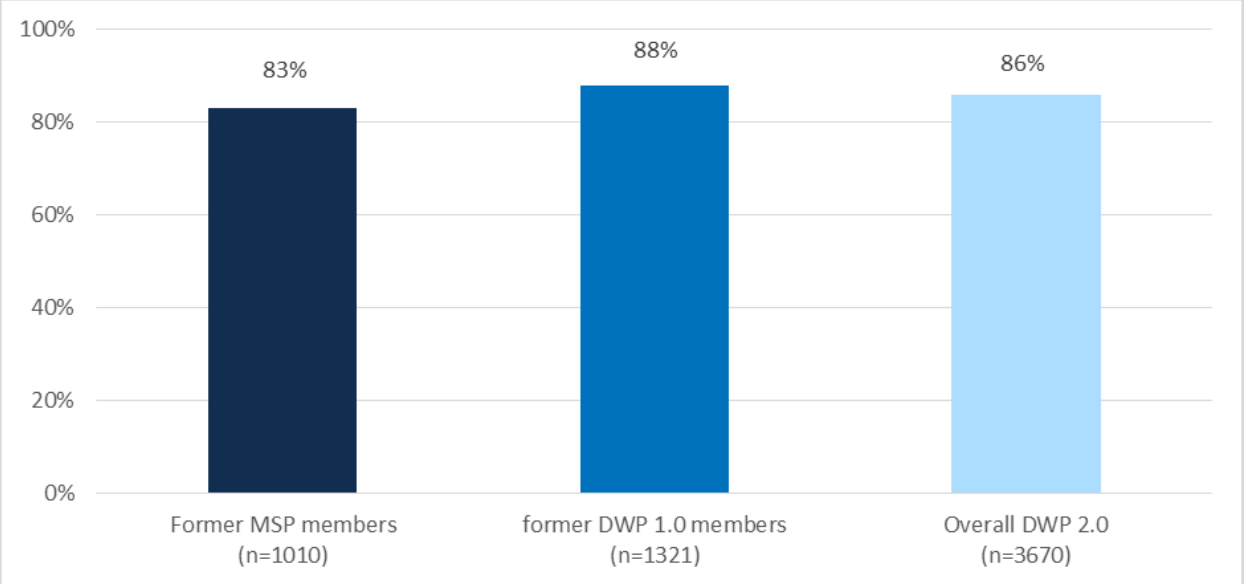


Figure 13. Members' recommendation of the plan to others, 2018 DWP Consumer Survey



Members with a regular dentist

In 2018, 59% of DWP 2.0 members reported **having a regular dentist** (Figure 14). Approximately 1 in 5 members had to **switch dentists when they joined their current plan** (Figure 15).

Although nearly 60% of DWP 2.0 members reported that they currently had a regular dentist (Figure 14), former MSP members reported greater **difficulty finding a new dentist** compared to former DWP 1.0 members (Figure 16).

Figure 14. Members' who currently have a regular dentist, 2018 DWP Consumer Survey

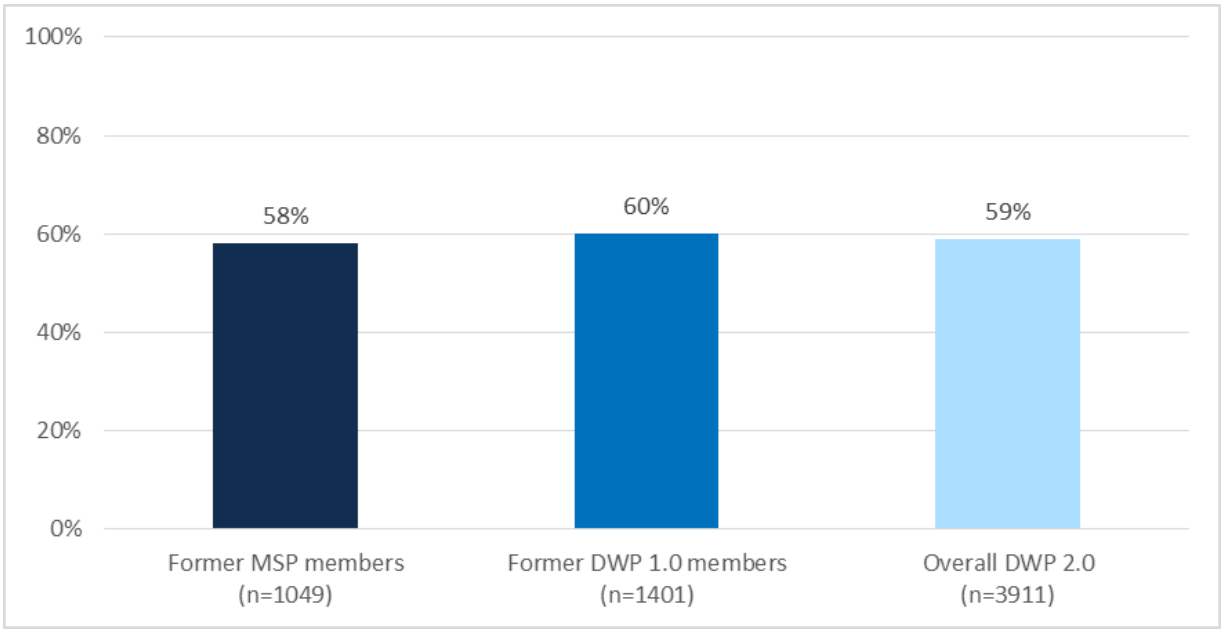


Figure 15. Members' who had to switch regular dentists when they joined their current plan, 2018 DWP Consumer Survey

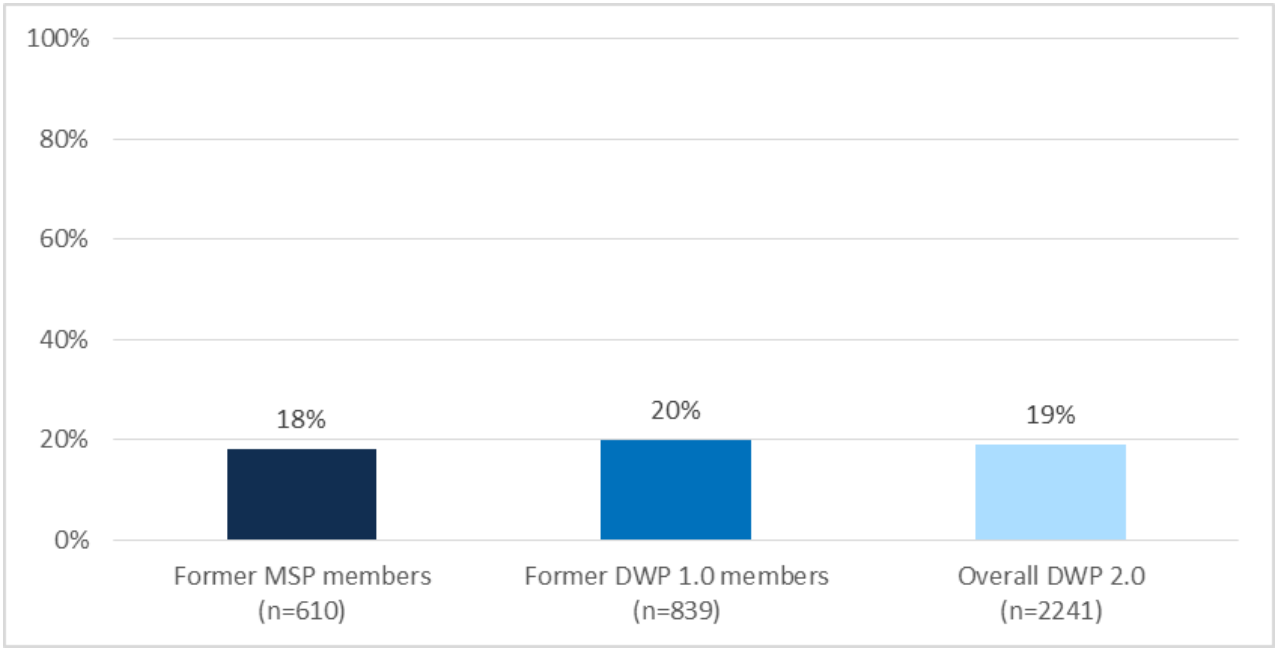
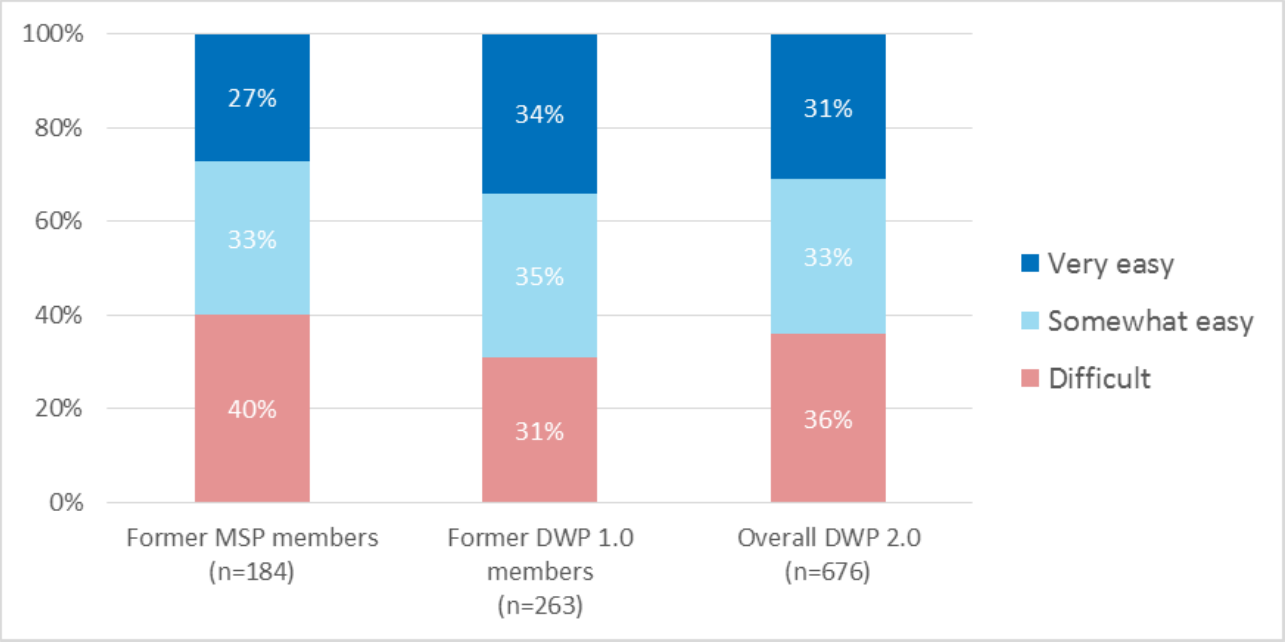


Figure 16. Member experiences finding a new dentist, 2018 DWP Consumer Survey



Overall hypothesis summary

In 2018:

- DWP 2.0 members reported high rates of self-reported avoidable ED visits for dental problems
- Former DWP 1.0 members reported higher ratings for dental plan compared to former MSP members
- Rates of members with a regular dentist and those who needed to switch dentists were relatively consistent between DWP 2.0 groups
- Greater proportions of former MSP members reported difficulty finding a new dentist in DWP 2.0

Hypothesis 1.5

DWP 2.0 members will report equal or greater satisfaction with the dental care provided than DWP 1.0 or MSP members did prior to July 1, 2017.

Due to our inability to compare survey results from 2016 and 2018, this hypothesis has been reworded to "DWP 2.0 members will report moderate to high satisfaction with their dental care".

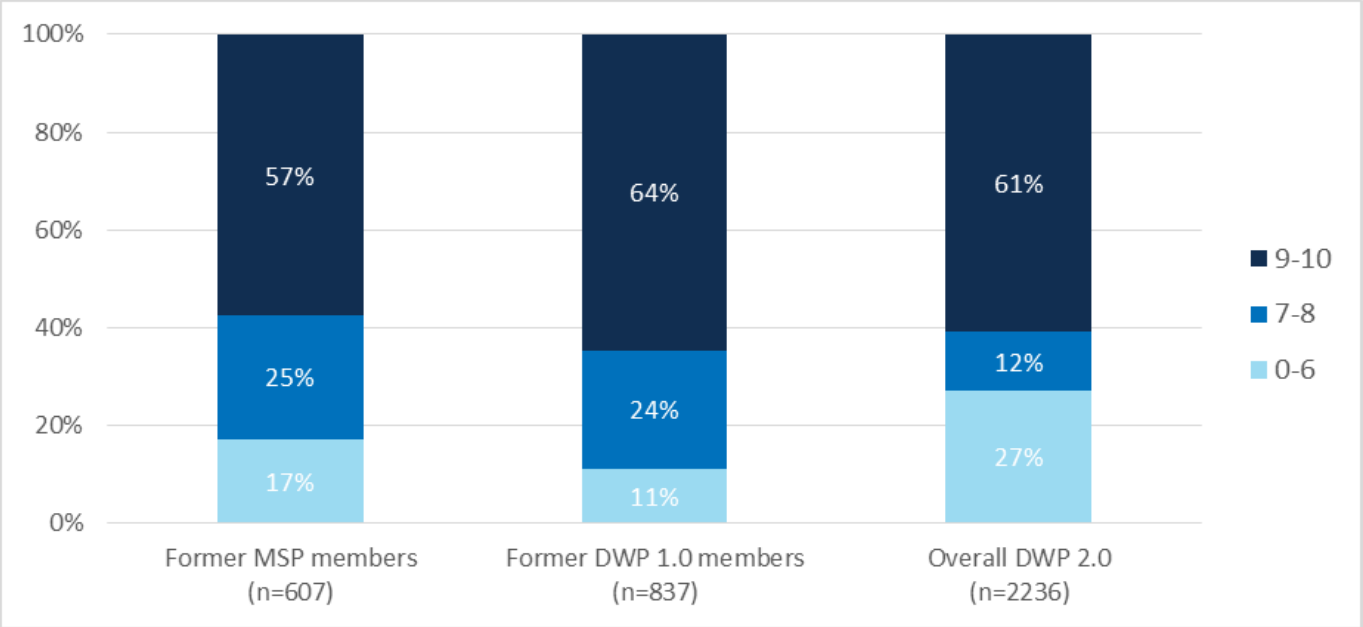
Measures include:

- Rating of regular dentist
- Rating of all dental care received
- Rating of DWP 2.0 – *also addressed by Hypothesis 1.4 (see Figures 12-13)*

Member satisfaction with dentist

Overall, in 2018, 6 in 10 DWP 2.0 members rated their dentist highly (rating of 9-10) (Figure 17). The proportion giving their dentist high ratings (9-10) was greater among former DWP 1.0 members compared to former MSP members (64% vs 57%).

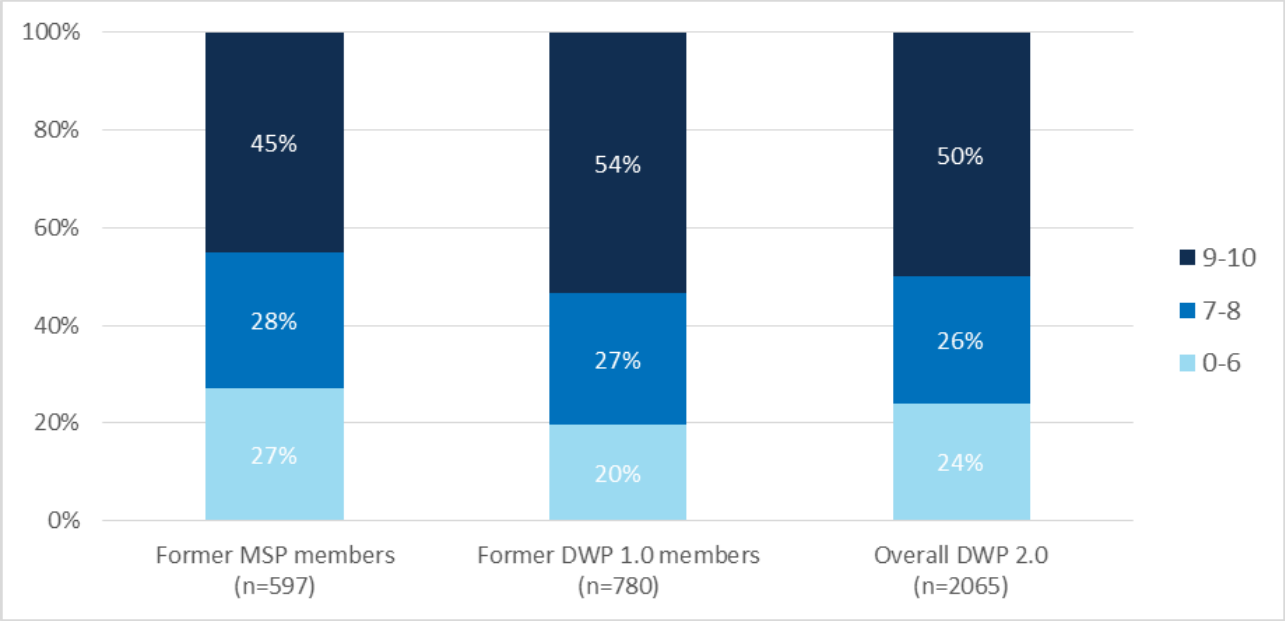
Figure 17. Rating (0-10, 10=best) of regular dentist, 2018 DWP Consumer Survey



Member satisfaction with dental care

Overall, half of DWP 2.0 members rated the quality of their dental care highly (rating of 9-10) (Figure 18). However, the proportion of members who gave high ratings to their dentist was approximately 10% higher among former DWP 1.0 members compared to former MSP members (54% vs. 45%).

Figure 18. Rating (0-10, 10=best) of all dental care received*, 2018 DWP Consumer Survey



*Reference period is 'Since July 2017' (survey administered in Spring 2018)

Overall hypothesis summary

Former DWP 1.0 members had greater satisfaction in all three domains compared to former MSP members

Hypothesis 1.6

DWP 2.0 members will report better understanding of their benefits when compared to the DWP 1.0 tiered structure. Measures include:

- Member awareness of healthy dental behavior requirements

Member awareness of healthy behavior requirements

Overall, almost two-thirds of DWP 2.0 members were unaware of any aspects of the healthy dental behavior requirements. Awareness of healthy behavior requirements was noted to be higher among former DWP 1.0 members (48%) than among former MSP members (28%) (Figure 19). The greatest proportion of members had awareness about the requirement for an annual dental checkup (31%). In comparison, 16% knew about the oral health self-assessment and 8% knew that their coverage would be reduced if the $3 premium was not paid (Table 11).

In the 2018 survey, DWP 2.0 members were slightly more likely to be aware of any of these healthy behavior requirements than the proportion of DWP 1.0 members who knew about the tiered benefit structure in 2016 (26%).[12]

[12] Reynolds JC, McKernan SC, Damiano PC, Sukalski J, McInroy B. Evaluation of the Dental Wellness Plan: Member Experiences after Two Years. Iowa City, IA: University of Iowa Public Policy Center. 2017.

Figure 19. Proportion of members who report awareness of any DWP 2.0 healthy dental behavior requirements, 2018 DWP Consumer Survey

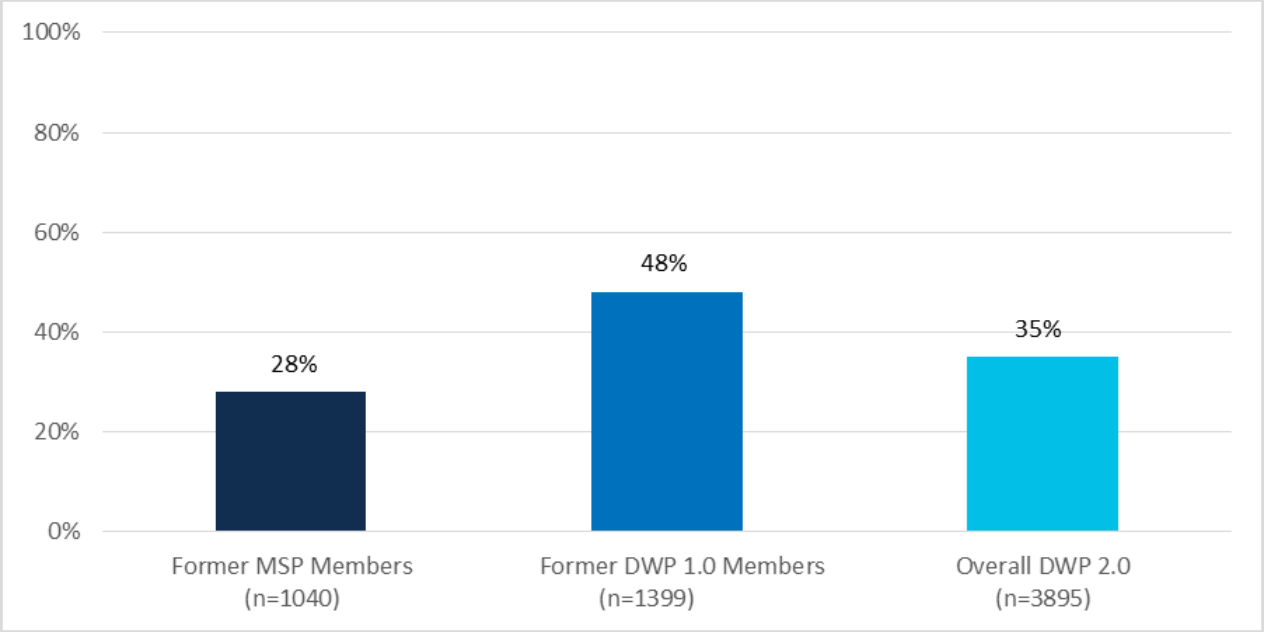


Table 11. Proportion of members who reported knowledge about key aspects of the DWP 2.0 program design, 2018 DWP Consumer Survey

Key Aspects	Former MSP members (n=671)	Former DWP 1.0 members (n=295)	Overall DWP 2.0 (n=1376)
A dental check-up is required every year to keep full benefits	42%	25%	31%
An oral health self-assessment is required every year to keep full benefits	22%	12%	16%
$3 monthly premium to keep full benefits if requirements are not met	14%	10%	12%
Dental benefits will be reduced if $3 premium is not paid	7%	11%	8%

Member knowledge about plan enrollment

In 2018, 16% of DWP 2.0 members were not aware that their insurance included coverage for dental care (Figure 20). Awareness of dental coverage was slightly greater among former MSP members than former DWP 1.0 members. Notably, nearly half of DWP 2.0 members did not know their dental carrier (Delta Dental of Iowa or MCNA Dental) (Figure 21).

Figure 20. Proportion of members who know that their insurance covers dental care, 2018 DWP Consumer Survey

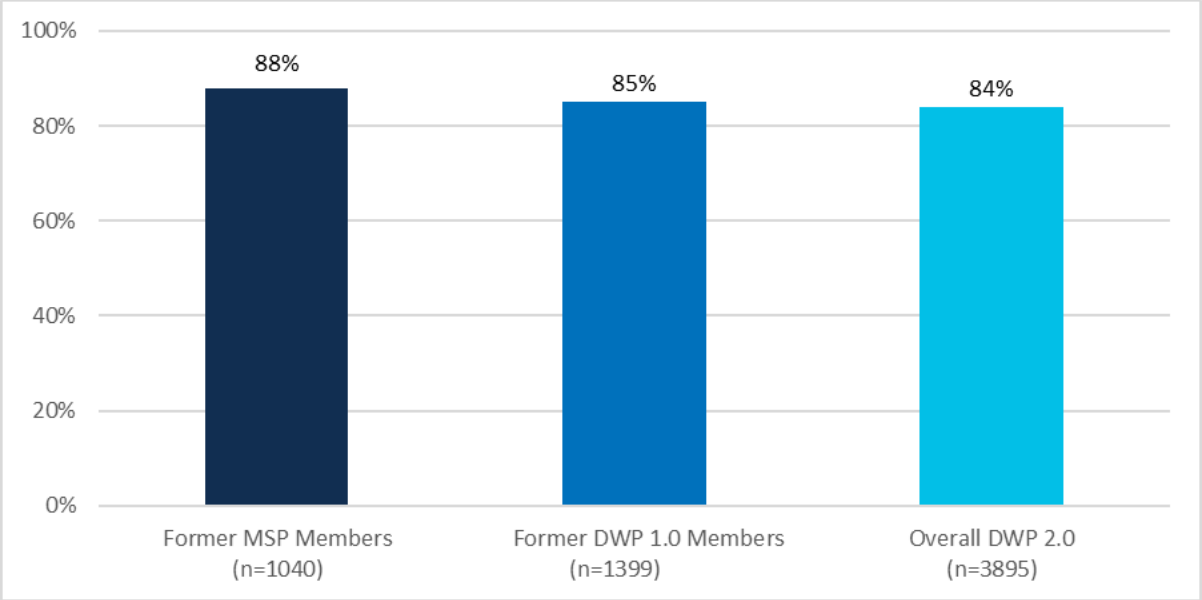
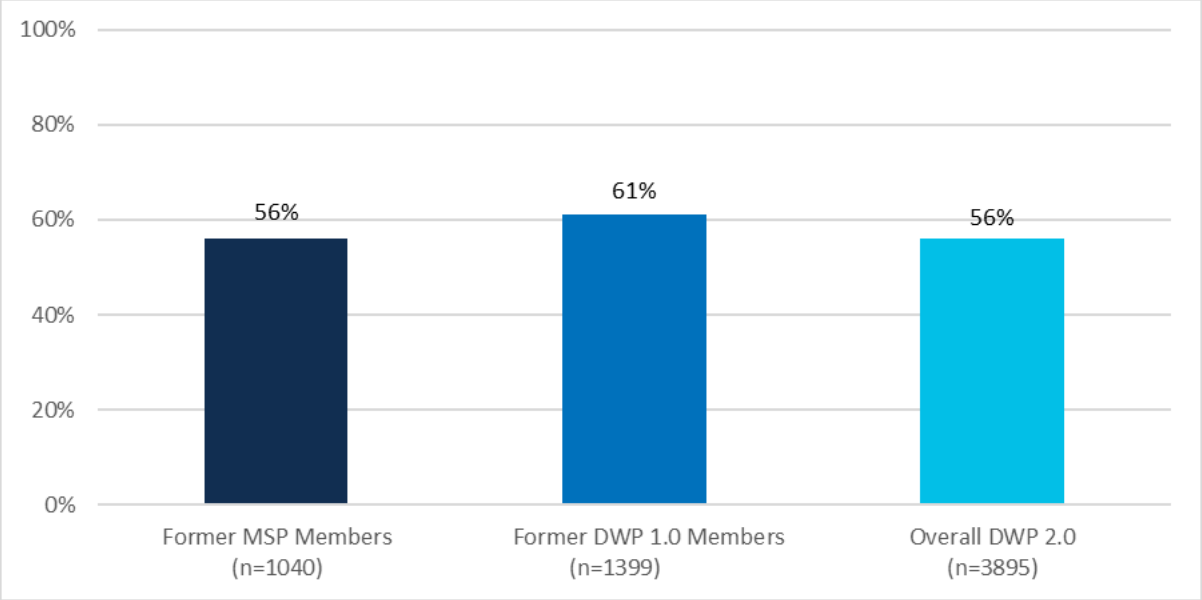


Figure 21. Proportion of members who know who their dental carrier is, 2018 DWP Consumer Survey



Overall hypothesis summary

Members had low levels of awareness about healthy dental behavior requirements, as well as dental carrier enrollment. However, awareness about the DWP 2.0 healthy behavior requirements was greater than member awareness about tiered coverage in DWP 1.0.

Hypothesis 1.7

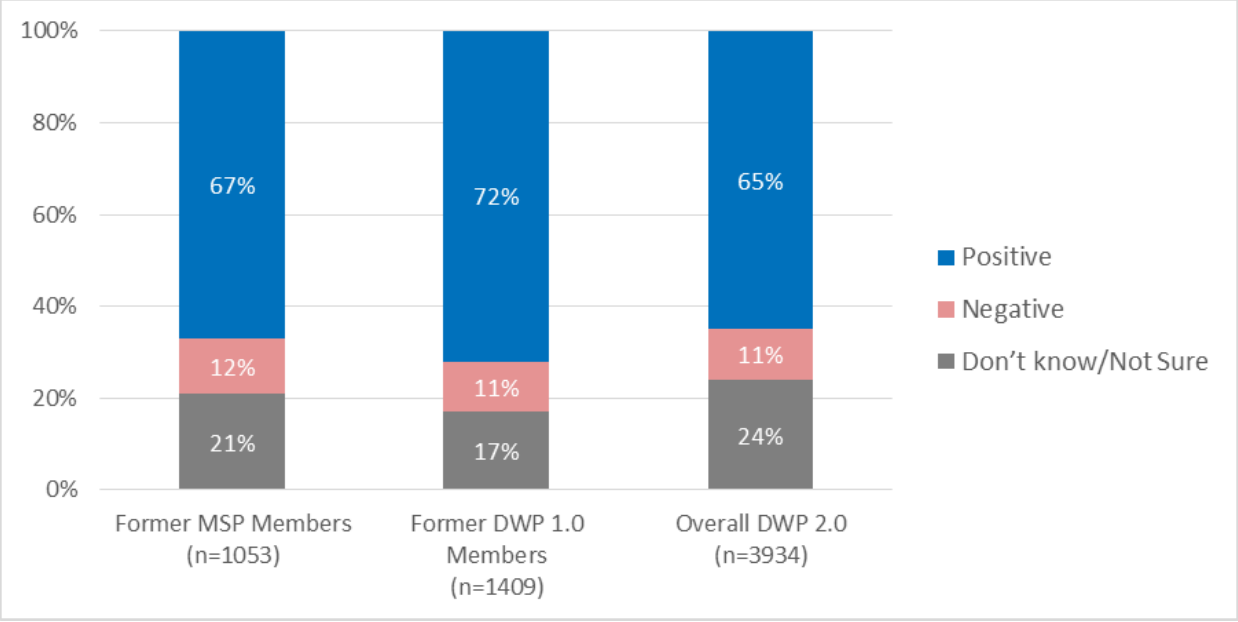
The earned benefit structure will not be perceived by members as a barrier to care in comparison to DWP 1.0. Measures include:

- Member attitude towards healthy dental behavior requirements
- Difficulty completing healthy dental behavior requirements
- Out-of-pocket dental expenditures
- Member experience with covered benefits.

Member attitudes toward healthy behavior requirements

In 2018, the majority of the DWP 2.0 population (65%) had a positive attitude towards the healthy behavior requirements (65%). A slightly greater proportion of former DWP 1.0 members (72%) reported a positive attitude compared to former MSP members (67%) (Figure 22).

Figure 22. Attitude toward the healthy behavior requirements, 2018 DWP Consumer Survey



Only a small proportion of former DWP 1.0 and MSP members reported self- and dentist-completed oral health assessments (9-15%) (Figure 23). Rates of ease of obtaining an annual check-up or cleaning were also similar among the two groups; 65-68% of members across both groups said it would be easy for them to get one (Figure 24). However, the two groups differed in their reported ability to pay the $3 monthly payments to keep full dental benefits. Sixty-two percent of former DWP 1.0 members reported being able to make these payments compared to 53% of former MSP members (Figure 25).

Figure 23. Member completion of oral health self-assessment, 2018 DWP Consumer Survey

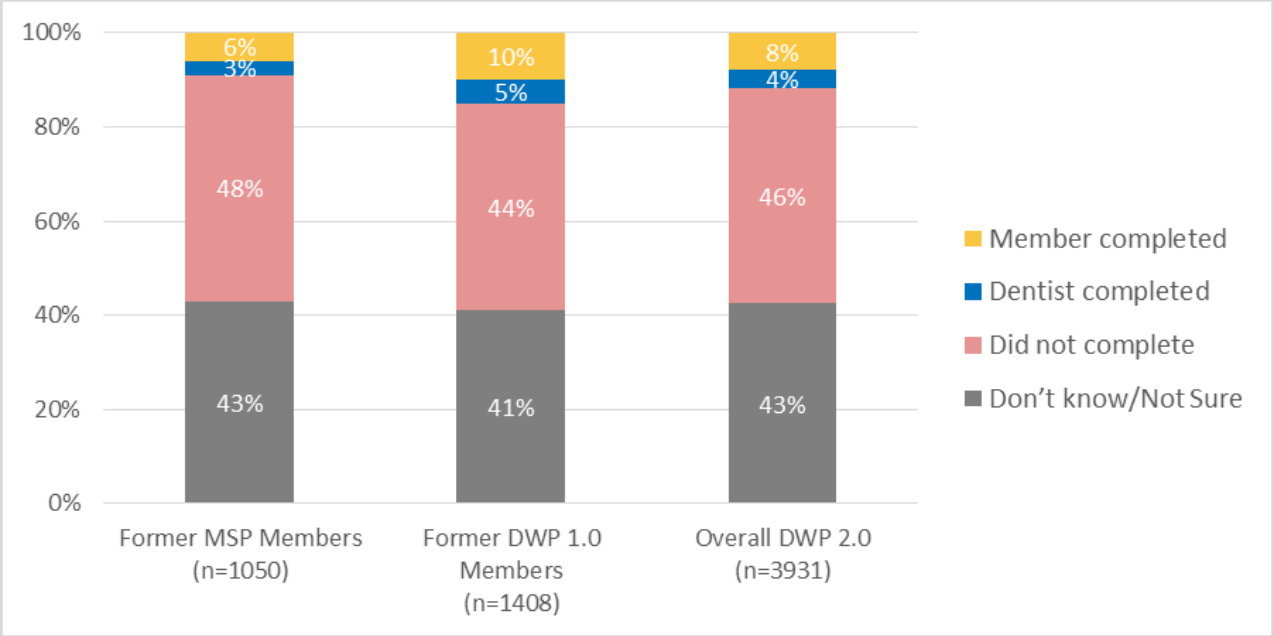


Figure 24. Ease of obtaining an annual checkup or cleaning, 2018 DWP Consumer Survey

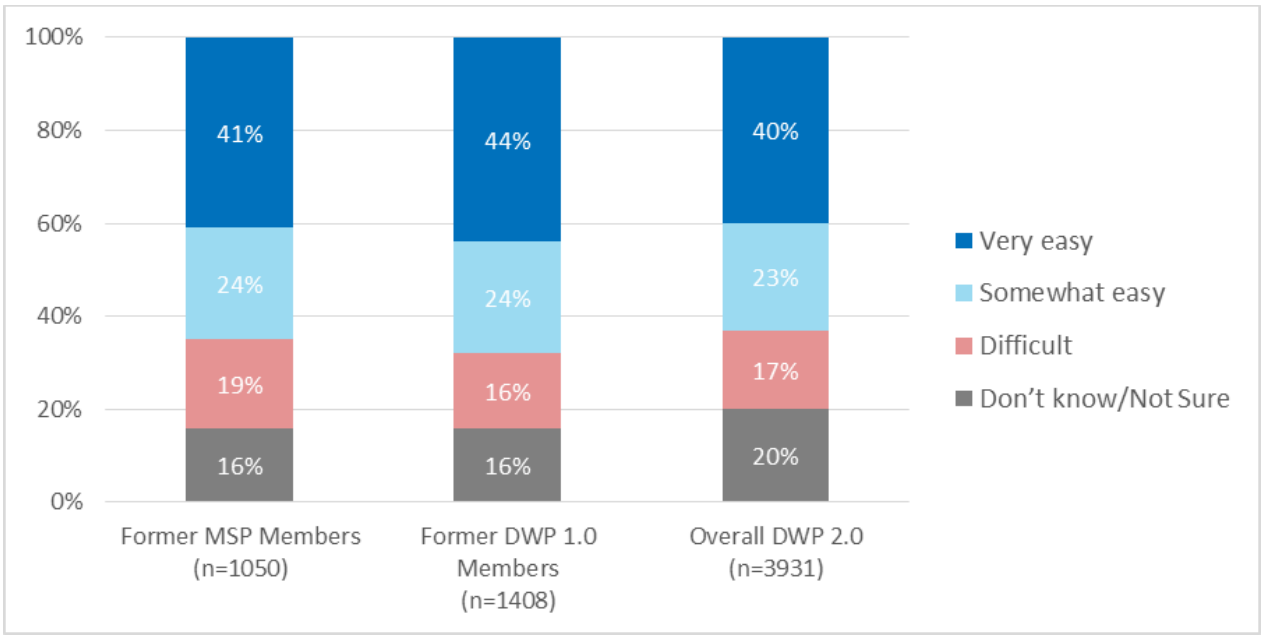
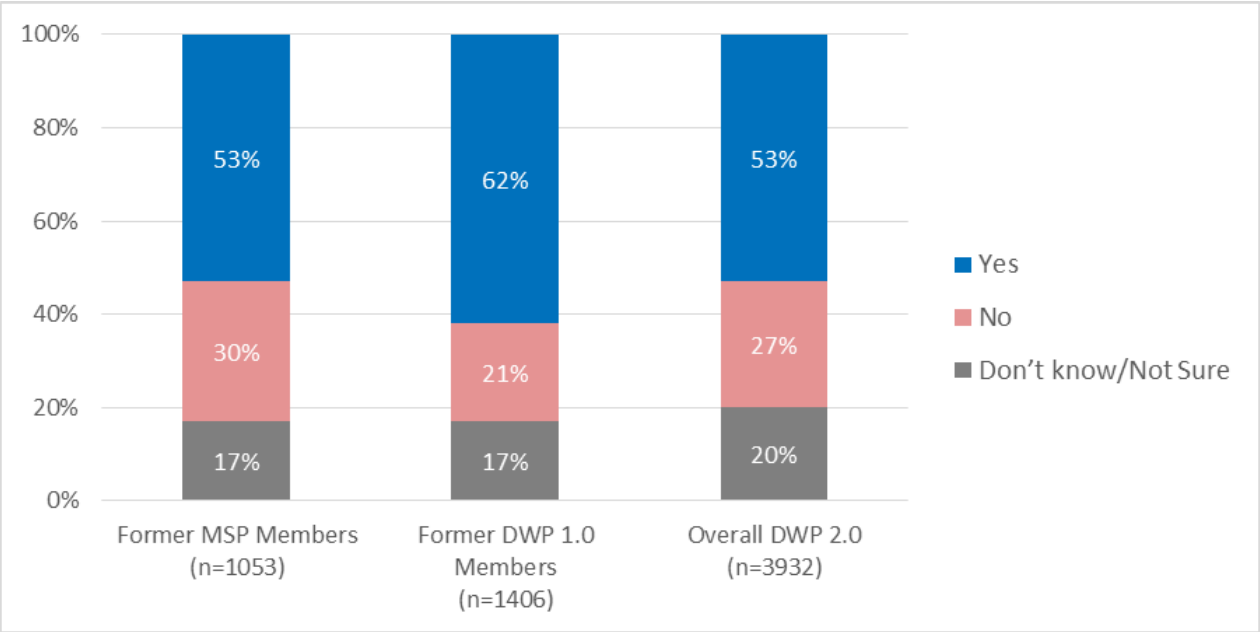


Figure 25. Ability to pay $3 monthly payment to keep full dental benefits, 2018 DWP Consumer Survey



Member coverage for needed care and out-of-pocket costs

In 2018, 12% of the overall DWP 2.0 population reported paying out-of-pocket for any dental service. This proportion was almost 10% greater among former DWP 1.0 members compared to former MSP members (Figure 26).

In 2018, half of the overall DWP 2.0 population (50%) reported that their dental plan covered all needed dental care; this proportion was comparable among the two population groups (Figure 27).

Trends in the types of dental services not covered were relatively similar across both DWP 2.0 study populations. Both groups reported 'check-up and cleaning' and 'tooth replacements' as their top two types of dental services that were not covered (Table 12).

Figure 26. Members reported paying out-of-pocket for any dental service, 2018 DWP Consumer Survey

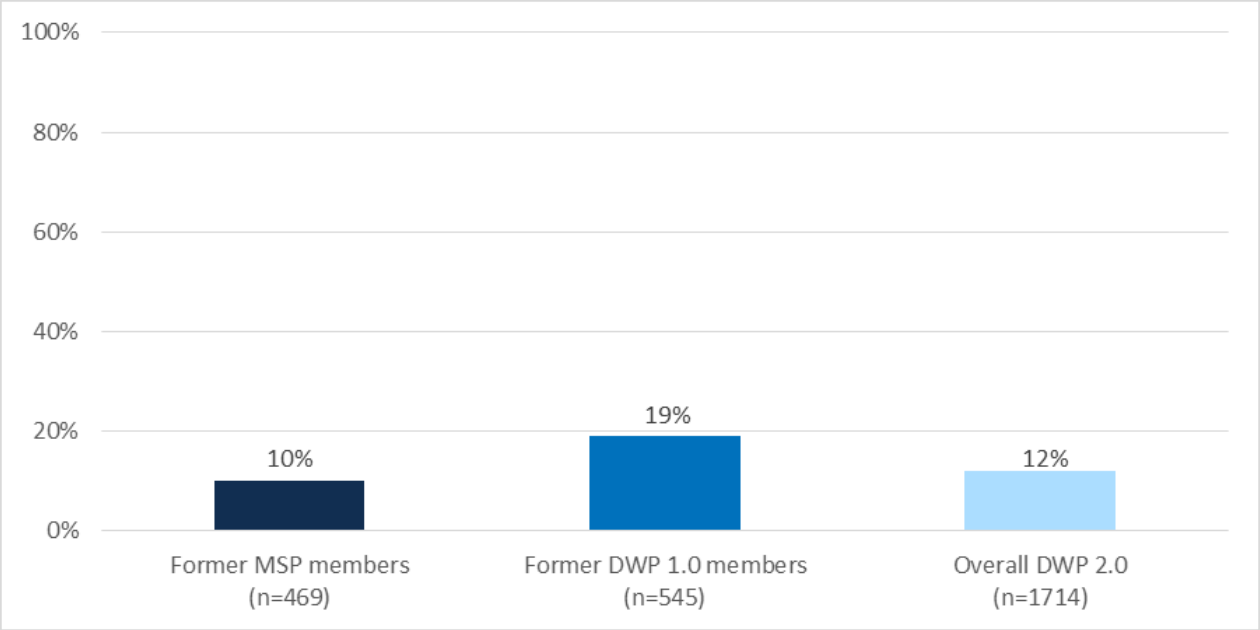
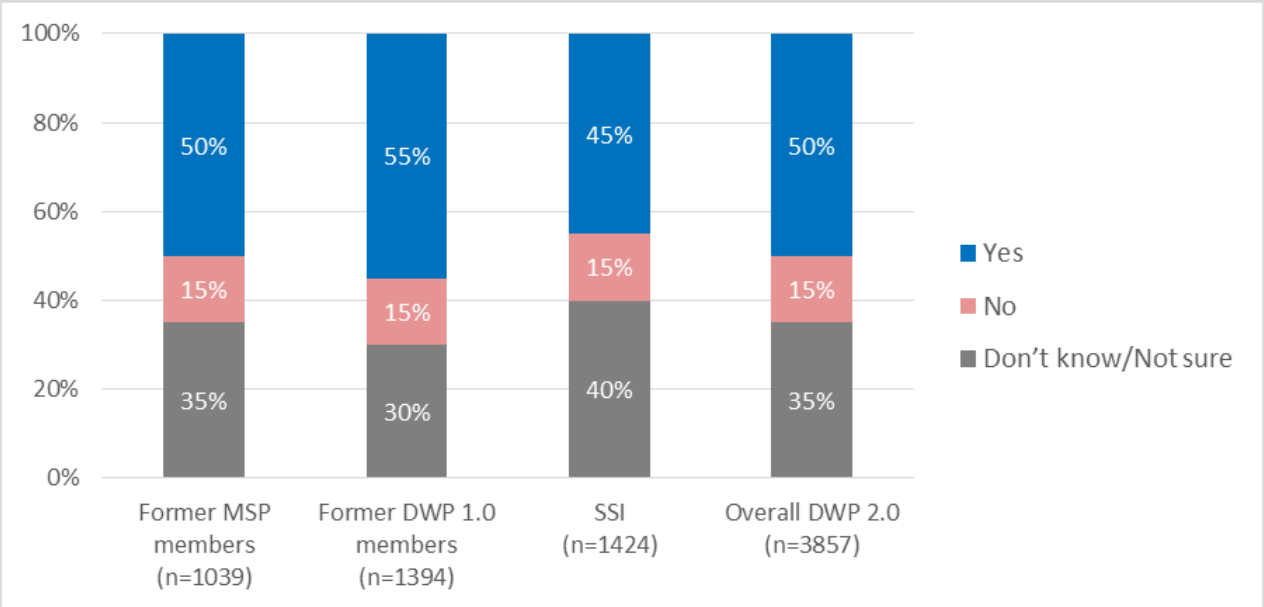


Figure 27. Current dental plan has covered needed dental care, DWP and Medicaid members reporting a recent* need for dental care, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Table 12. Needed dental services not covered by dental plan, 2018 Consumer Survey

Needed care that was not covered	Former MSP members (n=235)	Former DWP 1.0 members (n=293)	Overall DWP 2.0 (n=861)
Checkup and cleaning	26%	34%	30%
Full dentures	17%	21%	27%
Tooth replacements, such as bridges or partial dentures	28%	27%	24%
Extractions	21%	24%	22%
Fillings	17%	22%	19%
Crowns/Caps	19%	22%	18%
Root canal or other emergency care	15%	12%	12%

Overall hypothesis summary

Attitude towards the healthy behavior requirements in DWP 2.0 was positive among both- former DWP 1.0 and former MSP members. Both groups appeared to find it easy to obtain an annual check-up or cleaning. On the other hand, very few members had completed the oral health-self assessments component of the healthy behaviors requirement. A greater number of former DWP 1.0 members reported an ability to pay the $3/month payments compared to former MSP members.

While self-reported out-of-pocket payment for needed dental care was greater among former DWP 1.0 compared to former MSP members, a similar proportion in both groups reported that their dental plan covered needed dental services.

Evaluation Question 2 - What are provider attitudes towards the DWP?

Hypothesis 2.1

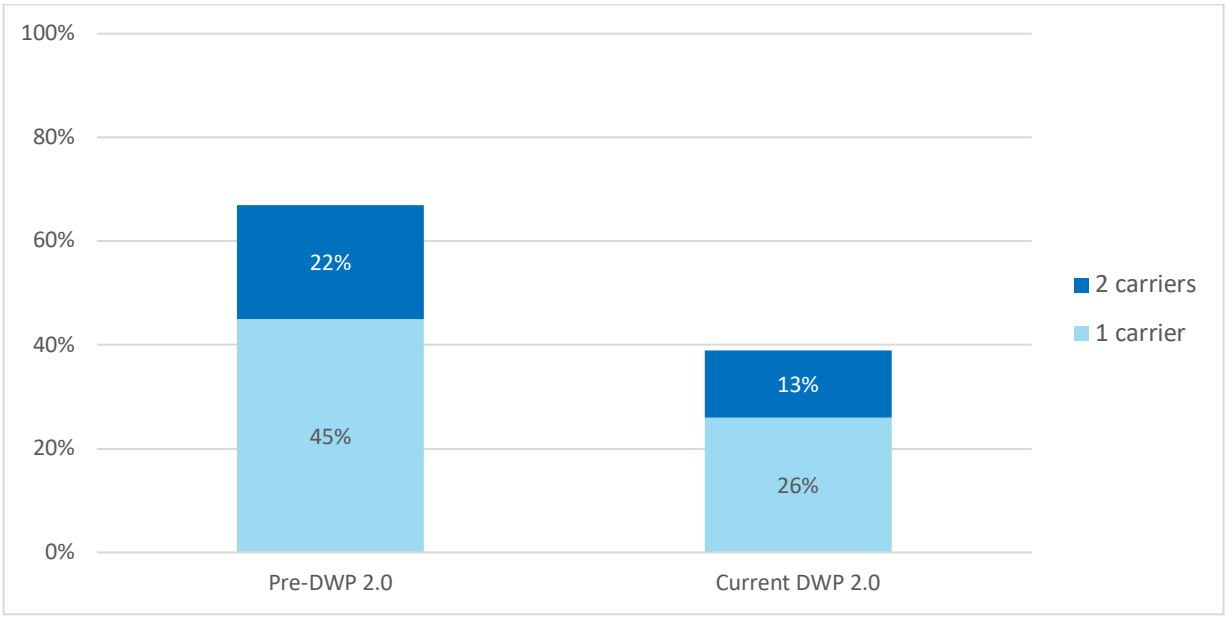
The DWP 2.0 benefit structure will not be perceived by dentists as a barrier to providing care. Measures include:

- Dentist willingness to accept new patients
- Dentist satisfaction with DWP 2.0

Provider willingness to accept new DWP patients

Overall, the proportion of dentists who reported that they accept new DWP patients considerably decreased with the implementation of DWP 2.0, from 67 to 39% (Figure 28).

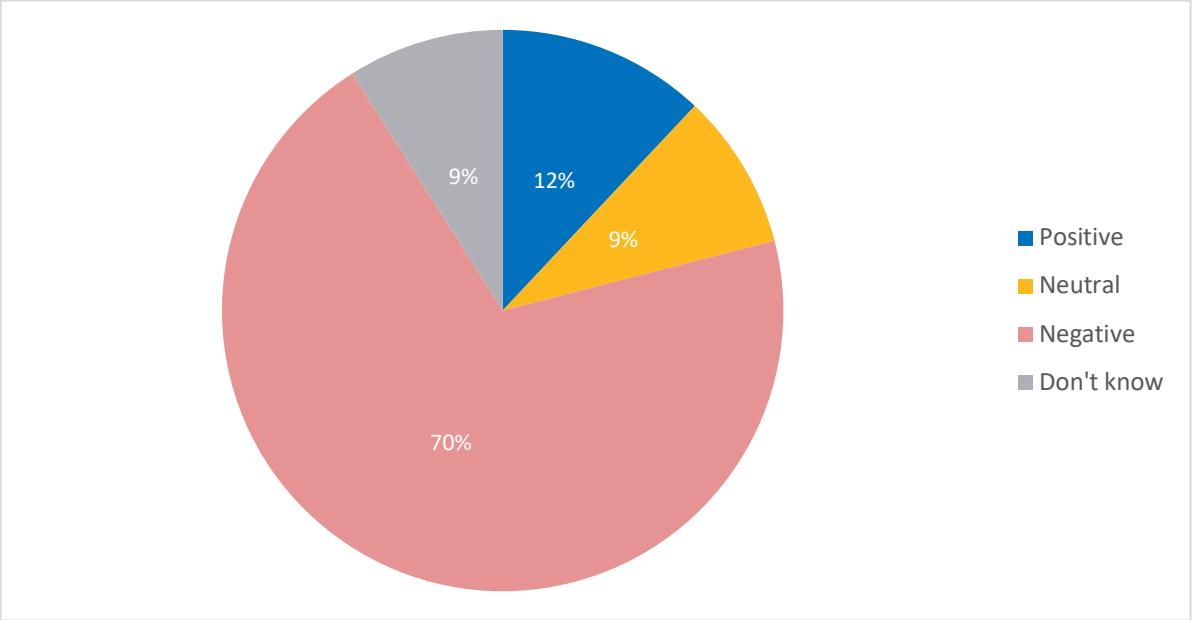
Figure 28. Proportion of dentists accepting new DWP patients before and after July 2017 by number of dental carriers accepted (n=305), 2017 Dentist Transition Survey



Dentist satisfaction with DWP 2.0

A majority (70%) of the dentists surveyed reported a negative attitude towards the DWP 2.0 (Figure 29).

Figure 29. Dentists' overall attitude toward DWP 2.0 (n=305), 2017 Transition Survey



Overall hypothesis summary

Substantially fewer dentists in DWP 2.0 are accepting new patients. Overall, dentists' attitudes towards the DWP 2.0 are largely unfavorable.

Hypothesis 2.2

Over 50% of DWP 2.0 providers will remain in the plan for at least 3 years. Measures include:

- Proportion of long term dental providers (2018 provides baseline data for this measure)

Evaluation Question 3 - What are the effects of the benefit structure – including healthy behavior requirements, cost sharing, and reduced benefits – on DWP member outcomes?

Hypothesis 3.1

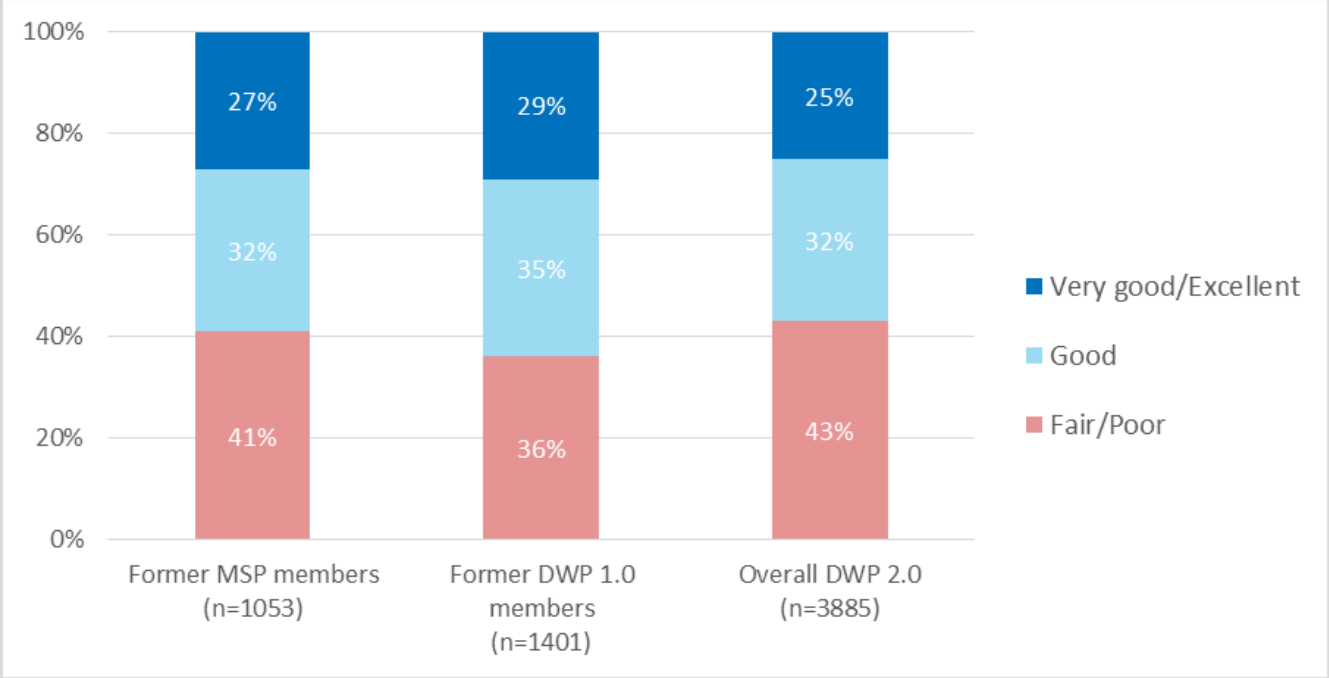
The benefit structure for DWP 2.0 members will increase regular use of recall dental exams over the study period. Measures include:

- Self-reported oral health status
- Member perceived impact of healthy dental behavior requirements

Members' oral health status

In 2018, one-fourth of the overall DWP 2.0 population (25%) perceived their oral health to be very good or excellent (Figure 30).

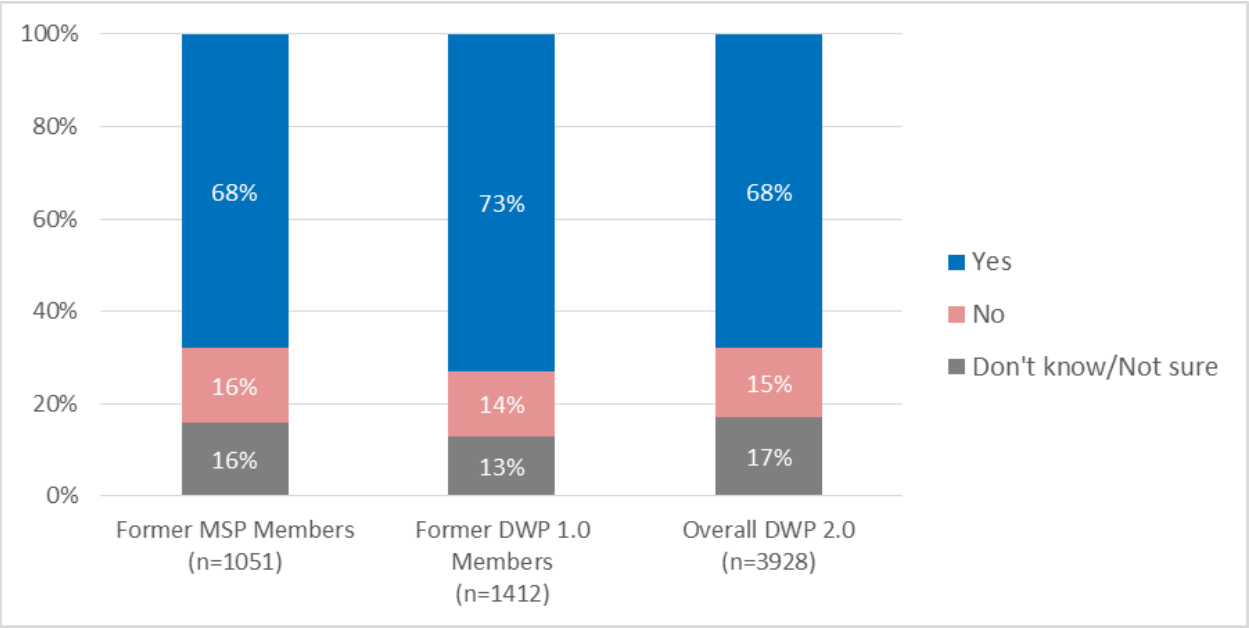
Figure 30. Self-reported oral health status, 2018 DWP Consumer Survey



Members' perception of program impact

Sixty-eight percent of DWP 2.0 members reported that the healthy dental behavior requirements would make them more likely to visit a dentist annually. This proportion was greater among former DWP 1.0 members compared to former MSP members (73% vs. 68%) (Figure 31).

Figure 31. Member perceived influence of healthy dental behavior requirements encouraging annual dental visits, 2018 DWP Consumer Survey



Overall hypothesis summary

The majority of DWP 2.0 members perceived a positive influence of the dental healthy behaviors requirements, making them more likely to visit a dentist.

Hypothesis 3.2

The benefit structure will not be seen as a barrier to care by DWP 2.0 members.

- *This hypothesis will be addressed by measures associated with Hypothesis 1.7.*

Overall hypothesis summary

Overall, the majority of members in both DWP 2.0 population groups reported a positive attitude towards the healthy behavior requirements. However, while members across both groups reported a greater perceived ease of obtaining an annual check-up or cleaning, a very small number of them had completed the oral health-self assessments. In addition, reported ability to pay the $3/month payments was greater among former DWP 1.0 members compared to former MSP members. Thus, despite the overall positive attitude towards DWP 2.0, there exists some barriers to seeking dental care among its members.

Hypothesis 3.3

In year 2 of the DWP 2.0 and beyond, use of preventive dental care will be greater than in the first year of the program. This hypothesis will be addressed by measures associated with Hypothesis 3.1.

Hypothesis 3.4

DWP 2.0 policies will promote member compliance with healthy dental behavior requirements. Measures include:

- Member compliance with healthy dental behaviors

Member compliance with healthy behavior requirements

Roughly half of the members in both DWP 2.0 study populations reported having a check-up or cleaning (Figure 32). However, very few members in both groups had completed the oral health self-assessments (9-15%) (Figure 33).

Figure 32. Member self-reported completion of a checkup or cleaning, 2018 DWP Consumer Survey

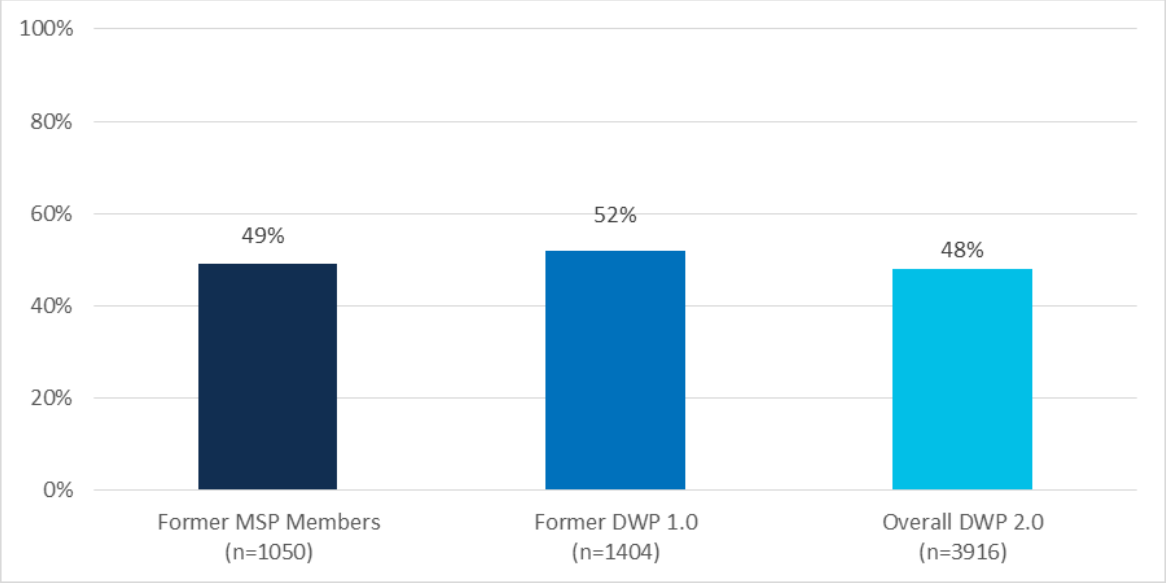
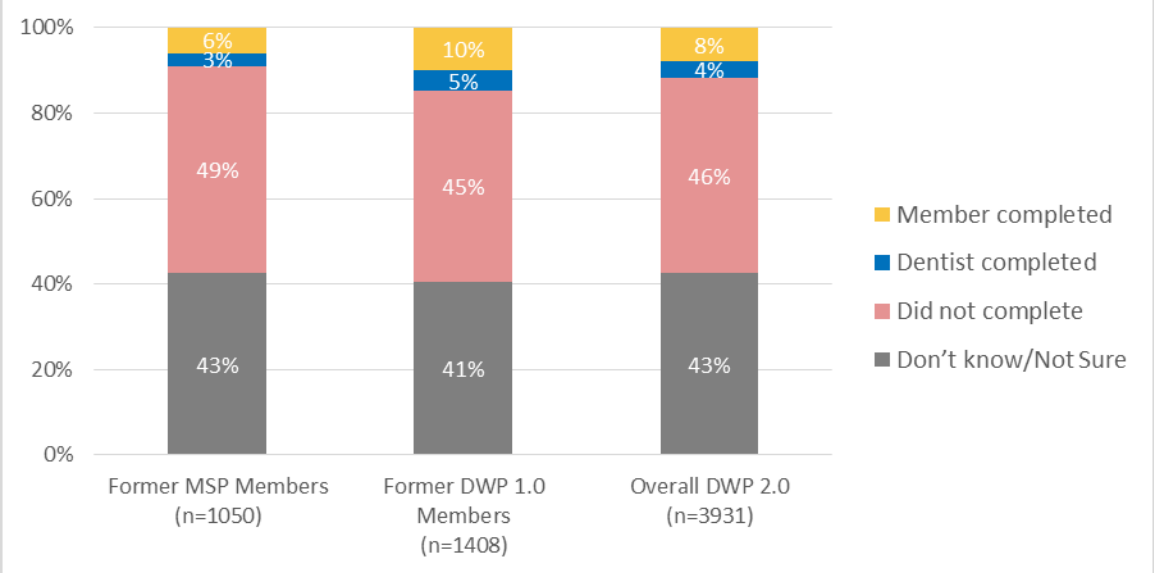


Figure 33. Member completion of oral health self-assessment, 2018 DWP Consumer Survey



Overall hypothesis summary

Of the two healthy behavior requirements, DWP 2.0 members were more likely to have visited a dentist for a check-up or cleaning than having completed the oral health self-assessments. More than two-thirds of DWP 2.0 members did not know or had not completed the oral health self-assessments.

Evaluation Question 4 - What are the effects of DWP member outreach and referral services?

Hypothesis 4.1 DWP 2.0 member outreach services will address dentists' concerns about missed appointments.

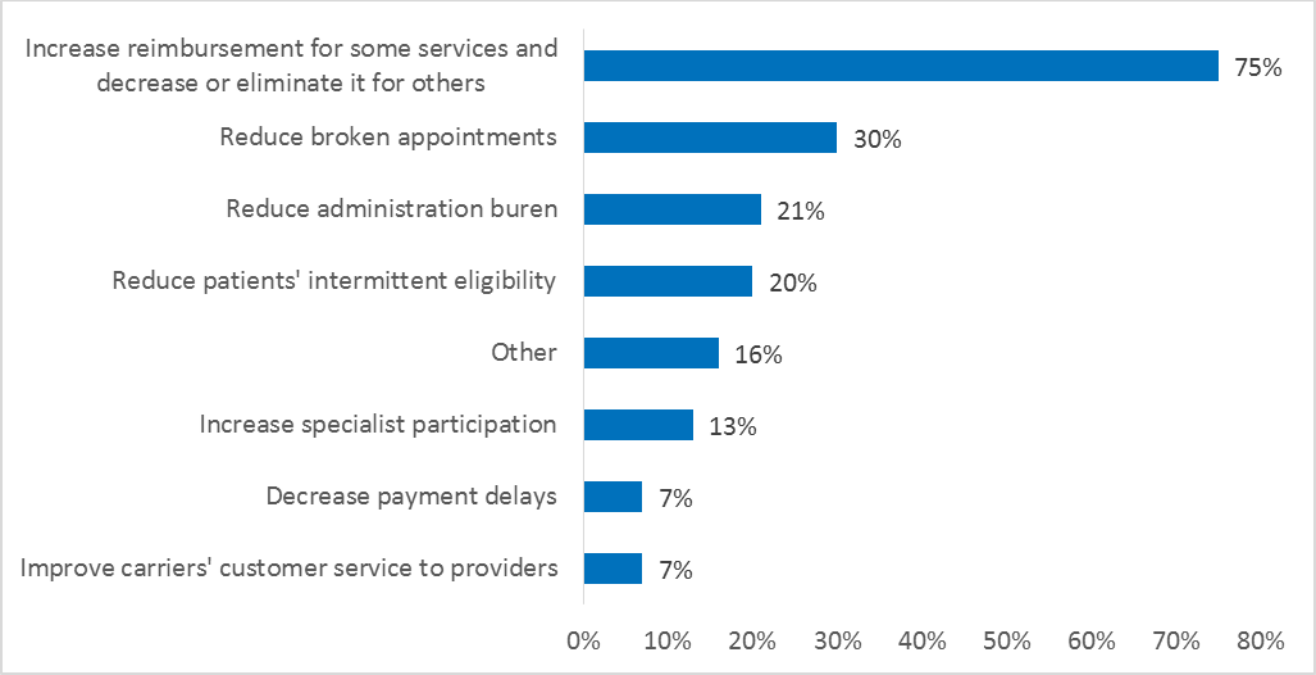
This hypothesis examines dental provider's concern with missed appointments and whether member outreach services are addressing those concerns. To evaluate this hypothesis, we considered:

- Dentist perceptions of missed appointments
- Member outreach for healthy dental behavior requirements

Dentist perceptions of missed appointments

Reducing broken appointments was the second most frequently selected change that dentists would like to see to increase participation in the DWP 2.0 program, followed behind changes to reimbursement levels (Figure 34).

Figure 34. Dentist's most commonly identified changes that could be made to increase dentist participation in DWP 2.0 without increasing the overall cost of the program (n=297), 2017 Dentist Transition Survey



Member outreach services

In 2018, approximately 11% of DWP 2.0 members had communication with member outreach services (Figure 35). Of those, 68% reported that they received a reminder to return for a regular check-up appointment (Table 13).

Figure 35. Members who communicated with an insurance representative, 2018 DWP Consumer Survey

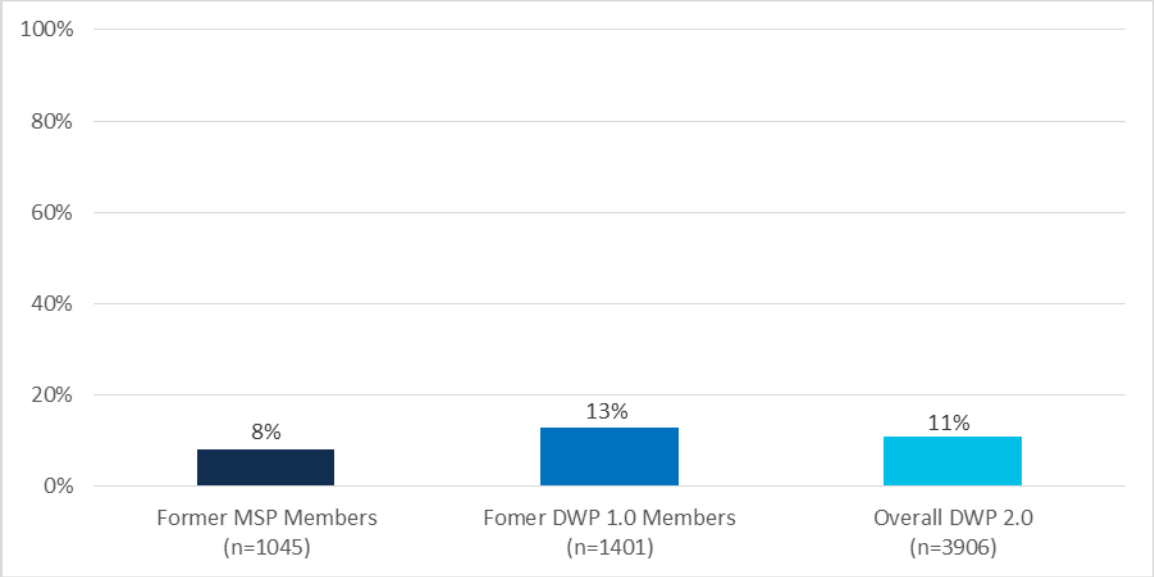


Table 13. Information discussed with insurance representative, 2018 DWP Consumer Survey

	Former MSP members (n=82)	Former DWP 1.0 Members (n=167)	Overall DWP 2.0 (n=401)
Reminder to return for a regular dental checkup	63%	69%	68%
Reminder to complete oral health self-assessment	28%	41%	32%
Finding a DWP dentist	26%	14%	17%
Other	7%	8%	8%

Overall hypothesis summary

Though only a small proportion of DWP 2.0 members utilized member outreach services, a majority reported being reminded to return for regular dental checkups.

Hypothesis 4.2 DWP 2.0 member referral services will improve access to specialty care for DWP 2.0 members as compared to MSP members prior to July 1, 2017. Measures include:

This hypothesis compares self-reported need and access to specialty care for DWP 2.0 members and previously MSP members. To evaluate this hypothesis, we considered:

- The proportion of members reporting need for care by a specialist
- Type of care needed from a dental specialist77

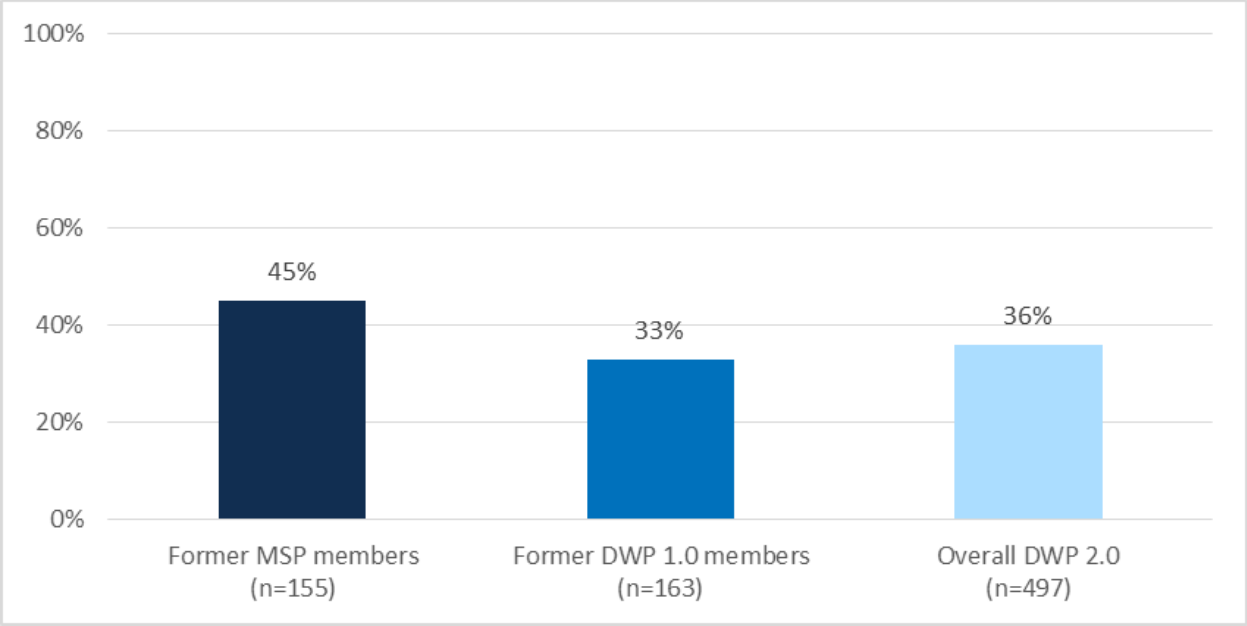
- Utilization of specialty dental services- ADMINISTRATIVE DATA
- Timeliness of getting an appointment with dental specialist

Unmet need for specialty care

In 2018, 36% of the overall DWP 2.0 population reported unmet need for specialty care (Figure 36). This proportion was considerably greater among former MSP members compared to former DWP 1.0 members (45% vs. 33%).

The **types of self-reported specialty services needed** were similar across both population groups (Table 14). Need for extractions or other oral surgery was the most common type of unmet specialty care reported by both groups; 51% among former DWP 1.0 members and 41% among former MSP members. The second most common type of specialty service needed was 'root canal or other endodontic treatment' (32-33%) (Table 12).

Figure 36. Self-reported recent* unmet dental need for specialist care, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

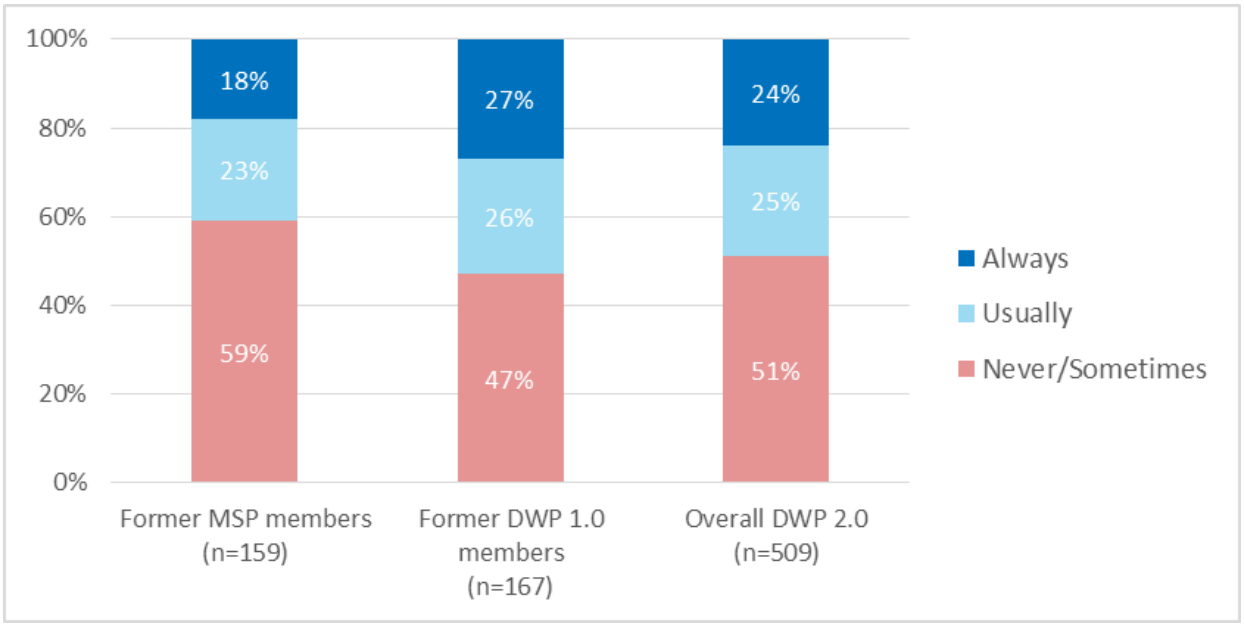
Table 54. Unmet need for specialist dental services, 2018 Consumer Surveys

Type of specialist care needed	Former MSP members (n=66)	Former DWP 1.0 members (n=49)	Overall DWP 2.0 (n=166)
Tooth pulled or other oral surgery	41%	51%	45%
Root canal or other endodontic treatment	32%	33%	35%
Dentures, crowns, bridge, or other prosthodontic care	29%	27%	33%
Treatment for gum disease or other periodontal care	11%	25%	16%
Other treatment	18%	8%	13%

Timeliness of specialty care

In 2018, 24% of the overall DWP 2.0 population reported receipt of specialty care as soon as wanted, while 51% reported never or sometimes obtaining specialty care as soon as wanted (Figure 37). Fewer former MSP members reported receipt of specialty care as soon as wanted compared to former DWP 1.0 members (18% vs 27%).

Figure 37. Appointment for specialist dental care as soon as wanted, 2018 DWP Consumer Survey



Overall hypothesis summary

Overall, fewer DWP 2.0 members reported timely access to specialty care. The type of specialty services needed was comparable among DWP 2.0 populations. However, always obtaining specialty care as

soon as needed was more common among former DWP 1.0 members compared to former MSP members.

Hypothesis 4.3

DWP 2.0 member outreach will improve DWP 2.0 members' compliance with follow-up visits, including recall exams, as compared to DWP 1.0 and MSP members.

- *This hypothesis will be evaluated in Year 2 (2019 Annual Report)*

Hypothesis 4.4 DWP 2.0 member outreach will improve members' access to a regular source of dental care.

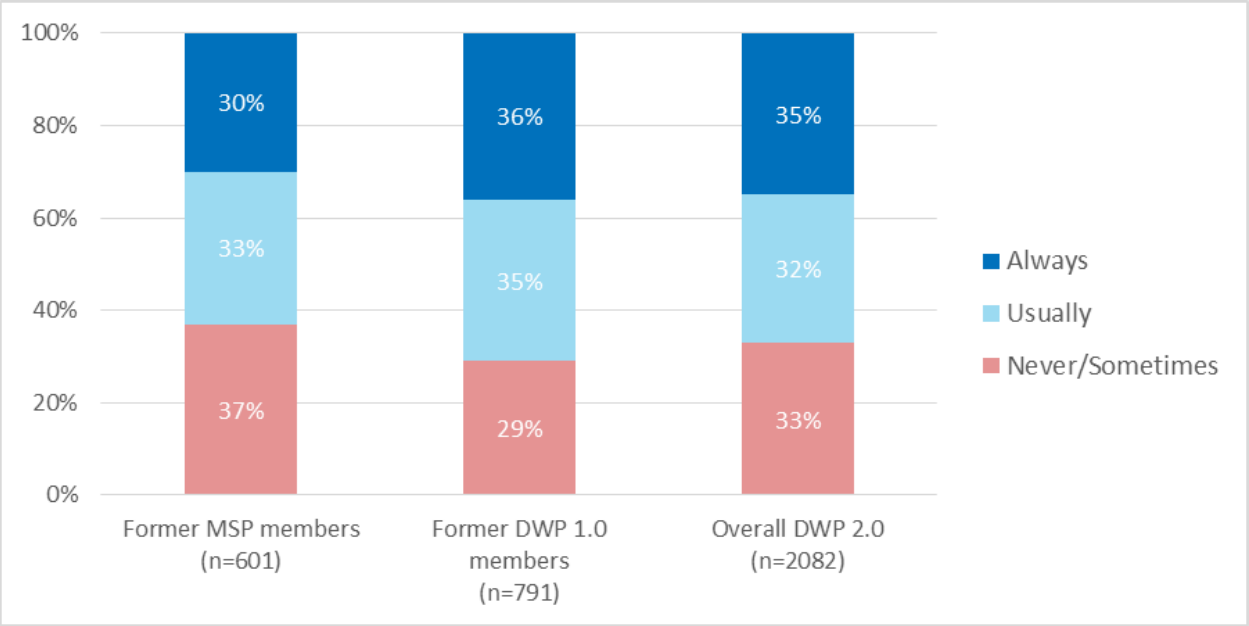
This hypothesis examines members ability to find a dental provider and receive care as soon as wanted. To evaluate this hypothesis, we considered:

- Members with a regular dentist - *addressed by measure associated with Hypothesis 1.4* Timeliness of getting a routine dental appointment
- Finding a dentist who accepts DWP insurance

Timeliness of routine dental appointment

In 2018, 35% of the overall DWP 2.0 population reported receipt of routine care as soon as wanted and 33% reported never or sometimes obtaining routine care as soon as wanted (Figure 38). These proportions differed between the two population groups; slightly greater number of former DWP 1.0 members reported receipt of routine dental care as soon as wanted compared to former MSP members (36% vs 30%).

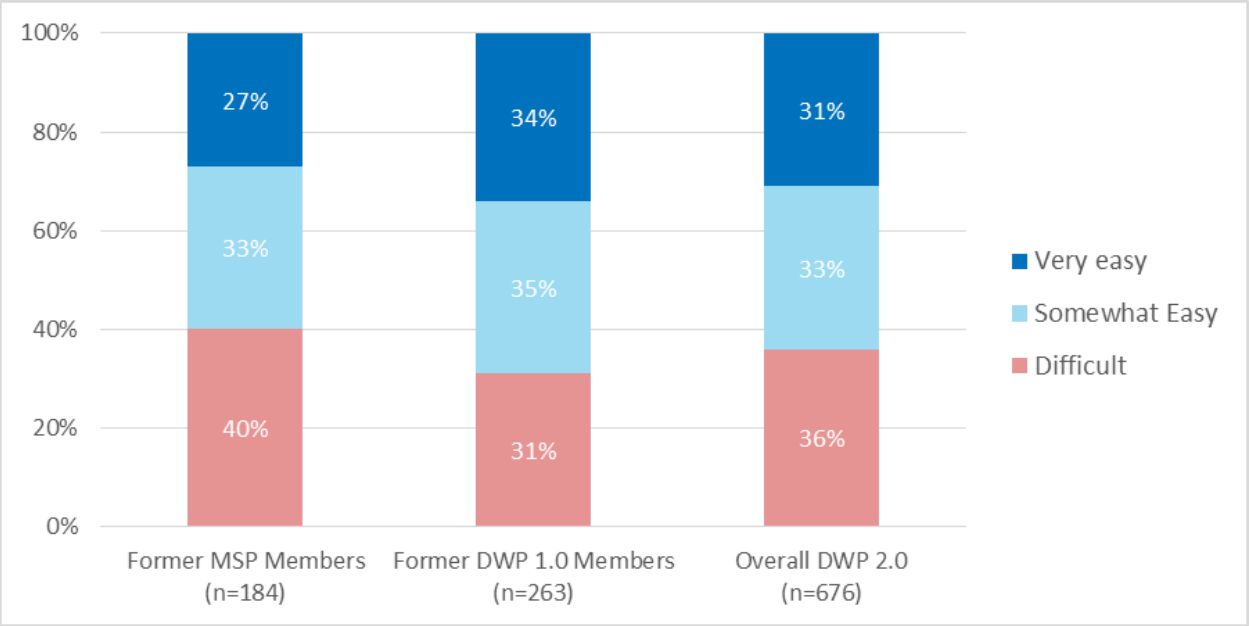
Figure 38. Appointment for routine dental care as soon as wanted, 2018 DWP Consumer Survey



Ease of finding dental provider

In 2018, nearly 60% of DWP 2.0 members reported **having a regular dentist** (Figure 14). Approximately 36% of DWP 2.0 members had difficulty finding a dental provider who accepted DWP 2.0, with former MSP members (40%) reporting more difficulty than former DWP 1.0 members (31%) (Figure 39).

Figure 39. Ease of finding a dentist who accepts DWP/Medicaid, 2018 DWP Consumer Survey



Overall hypothesis summary

Timely access to routine dental care appeared to slightly greater for former DWP 1.0 members compared to former MSP members. While nearly 60% of DWP 2.0 members have a regular dentist, it appears that former MSP members experience a more difficult time finding a dental provider.

Conclusions and Policy Implications

- Difficulty finding a participating dentist in the new DWP 2.0 is implicated in several outcomes reported here – including difficulty finding a new dentist, being seen in a timely fashion for a dental emergency, and follow-up with a dentist after an emergency department visit. Members' difficulty finding a new dentist is mirrored by our finding that fewer dentists report accepting DWP 2.0, compared to DWP 1.0. Program initiatives to improve dentist availability could improve outcomes across multiple domains.
- Future consumer surveys will probe into the reasons why rates for follow-ups with a dentist after emergency department visits for non-traumatic dental conditions have declined. We will also pay close attention to how these rates change from year to year.
- Former MSP members (eligible via FMAP) demonstrated difference experiences with their transitioned into DWP 2.0 compared to former DWP 1.0 members. Specifically, former DWP 1.0 members reported easier experiences finding new dentists, receiving timely dental care; they were also less likely to report unmet need for receiving specialty dental care. This trend may partially be explained by increased familiarity with the DWP program (or their insurance carrier) prior to July 2017. For example, former DWP 1.0 members were more likely to have communicated with an insurance representative and were more likely to have completed their oral health self-assessment. If this is the case, we would expect these differences between former MSP and DWP 1.0 members to decrease over time. However, almost half of the 2018 Consumer Survey respondents (in either comparison group) did not know who their dental carrier was.
- Members had low awareness about benefits and healthy behaviors. Lack of member awareness about their carrier can cause confusion and frustration when trying to seek care with a new provider, as dental offices often ask new patients about dental insurance. Lack of awareness about healthy behaviors may prevent members from maintaining full benefits. Since member coverage and access to care is directly related to their understanding of healthy behavior requirements, it is particularly important that members be educated about their responsibilities.
- We did not explore differences in outcomes or experiences by DWP carrier (i.e. Delta Dental of Iowa vs. MCNA Dental). Some disparities over time or between the former MSP and DWP 1.0 populations may be associated with which carrier they are assigned to. We recommend that IME explore this as a source of variation to effectively guide the DWP 2.0 program as it matures.
- Similarly, we did not explore geographical variation in outcomes. Multivariate models indicate that rural or urban residency was significantly associated with the dental utilization. Provider availability and transportation issues may play a differential role in access for urban and rural populations. Outreach should consider this geographical variability in order to target their activities appropriately.

Appendix A – SSI comparison group

Introduction

The sampling frame for the DWP 2018 consumer survey, which measures self-reported utilization and perceptions of care in DWP 2.0, also included Medicaid FFS members eligible through the Supplemental Security Income (SSI) program. In this appendix, we report results for this SSI group and make comparisons with the other DWP 2.0 member groups (i.e., Former MSP members and Former DWP 1.0 members). Only 2018 survey-related hypotheses and measures are included in this section.

Key Findings

Utilization

A lower proportion of SSI members (49%) reported having at least one dental visit in the past 6 months, compared to former MSP (58%) and former DWP 1.0 (57%) members (Figure 2).

Access

Rates of unmet dental need for routine care and specialist care were similar among SSI and former DWP 1.0 members (Figure 3 and Figure 26). Compared to former MSP members, SSI and former DWP 1.0 members reported lower unmet dental need for routine care and specialist care (Routine care- SSI: 32% and former DWP 1.0: 30% vs. former MSP: 38%; Specialist care- SSI: 31% and former DWP 1.0: 33% vs. former MSP: 45%). Across all three member groups, 'extractions' and 'check-ups/cleaning' were the two most common services driving unmet need (Table 6).

SSI and former DWP 1.0 members were also comparable in their reported ease of obtaining appointments for specialist dental care; approximately 27-28% of former DWP 1.0 and SSI members reported 'always' getting an appointment as soon as wanted compared to only 18% of former MSP members (Figure 27). On the other hand, SSI members seemed to have the greatest difficulty getting appointments for routine dental care and emergency dental care. Forty-seven percent of SSI members reported 'never/sometimes' getting appointments as soon as wanted for routine dental care, compared to 37% of former MSP and 29% of former DWP 1.0 members (Figure 28). Likewise, considerably fewer SSI members reported waiting times of 'a day or less' for emergency dental care (33%), compared to former DWP 1.0 and former MSP members (42-43%) (Figure 4).

Quality

SSI and former DWP 1.0 members were more likely than former MSP members to give favorable ratings (9/10 on a rating scale of 0-10) of their dental plan (

Member satisfaction with plan

Overall, DWP 2.0 members were equally likely to give their plan a high rating (rating of 9-10) as a low rating (rating of 0-6) (Figure 12). However, a greater proportion of former DWP 1.0 members gave their plan a 9-10 rating compared to former MSP members (40% vs. 30%). More than 8 in 10 members of both groups would recommend their plan to others (Figure 13).

Figure), their regular dentist (Figure 12) and all dental care received (Figure 13). Overall, a majority of members across all three groups (>80%) said that they would recommend the Dental Wellness Plan to others (Figure 8).

Member Experience with Healthy Behavior Requirements

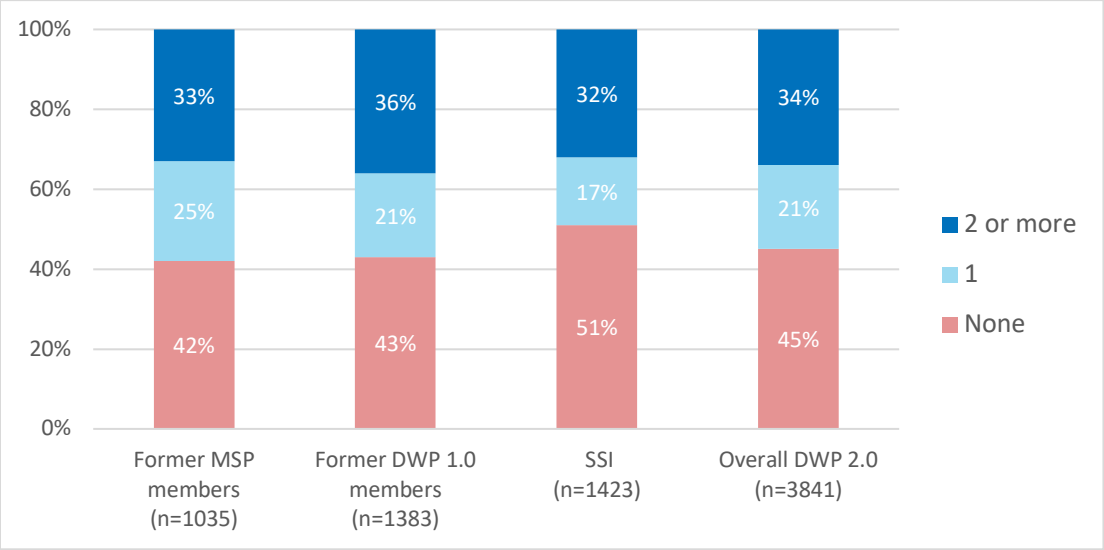
Reported awareness about the Healthy Behavior Requirements was lower among SSI and former MSP members (28%) compared to former DWP 1.0 members (48%) (Figure 14). Overall, SSI members had the least positive attitude towards the Healthy Behavior Requirements (SSI: 57% vs. former MSP: 72% and former DWP 1.0: 67%)

(Figure 18). The SSI group also had the lowest proportion of members reporting ability to pay $3 monthly premium (43%), compared to 53% of former MSP and 62% of former DWP 1.0 members (Figure 17). With respect to members' intention to obtain a check-up or cleaning, of the three groups, SSI members were the least likely to report 'having completed' and 'plan to complete' a check-up/cleaning' (SSI: 42% and 58%, former MSP: 49% and 79% and former DWP 1.0: 52% and 69%, respectively) (Figure 24). Lastly, fewer SSI members (58%) felt it would be easy to obtain an annual check-up/cleaning compared to 65% of former MSP and 68% of former DWP 1.0 members (Figure 16).

Evaluation Question 1 - What are the effects of DWP 2.0 on member access to care?

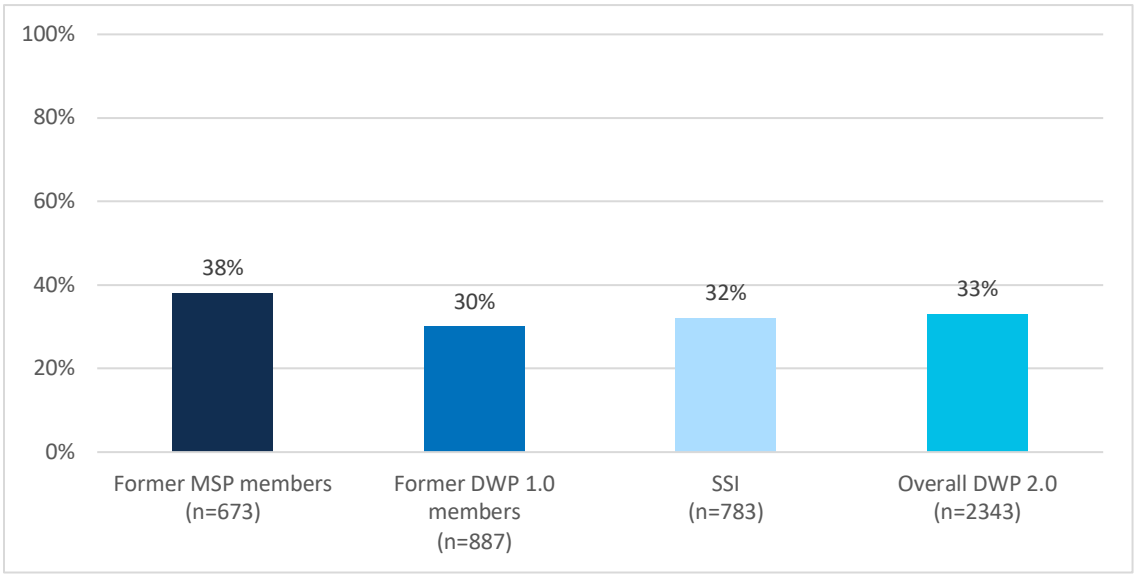
Hypothesis 1.1 measures

Figure 2. Self-reported recent* dental visit, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Figure 3. Self-reported recent* unmet dental need, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Table 6. Unmet need for dental services, 2018 Consumer Survey

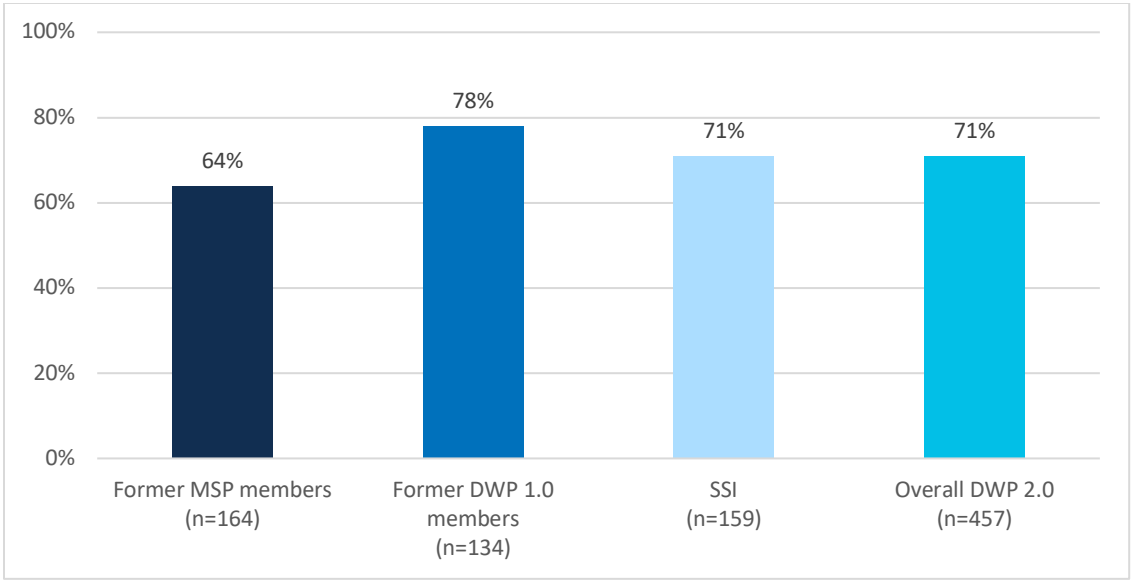
Type of care needed	Former MSP members (n=499)	Former DWP 1.0 members (n=462)	SSI (n=422)
Checkup and cleaning	47%	43%	37%
Fillings	37%	30%	27%
Extractions	34%	31%	38%
Crowns/Caps	21%	22%	15%
Tooth replacements, such as bridges or partial dentures	22%	24%	20%
Root canal or other emergency dental care	20%	14%	14%
Full dentures	12%	16%	31%
Other treatment	6%	6%	7%

Table 7. Reasons for unmet need for dental care, 2018 Consumer Survey

Reason	Former MSP members (n=504)	Former DWP 1.0 members (n=492)	SSI (n=495)
Could not afford it	27%	37%	26%
Care I needed was not covered by my insurance	33%	38%	27%
Trouble finding a dentist who accepted my insurance	60%	55%	50%
Fear or anxiety	20%	12%	24%
Had to travel too far or other transportation problems	28%	23%	38%
Trouble getting an appointment with a dentist for a reason other than not accepting my insurance	20%	15%	25%
Could not get off work	5%	7%	3%
Didn't know where to go at night or on the weekend for care	9%	11%	12%
Other reason	6%	5%	6%

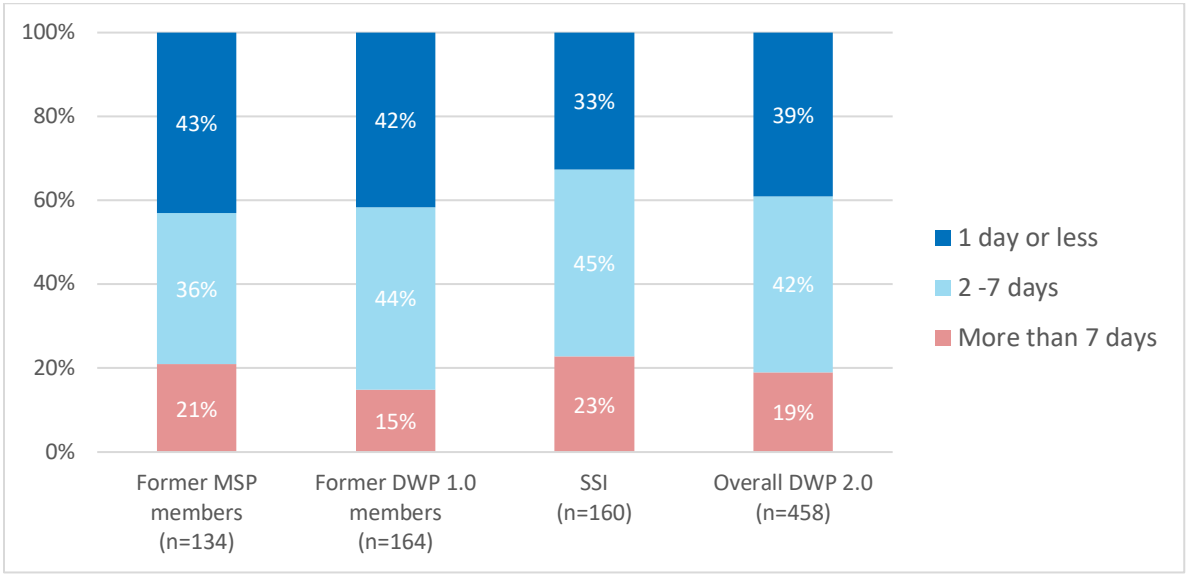
Hypothesis 1.3 measures

Figure 4. Appointment for recent* emergency dental care as soon as wanted, 2018 DWP Consumer Survey



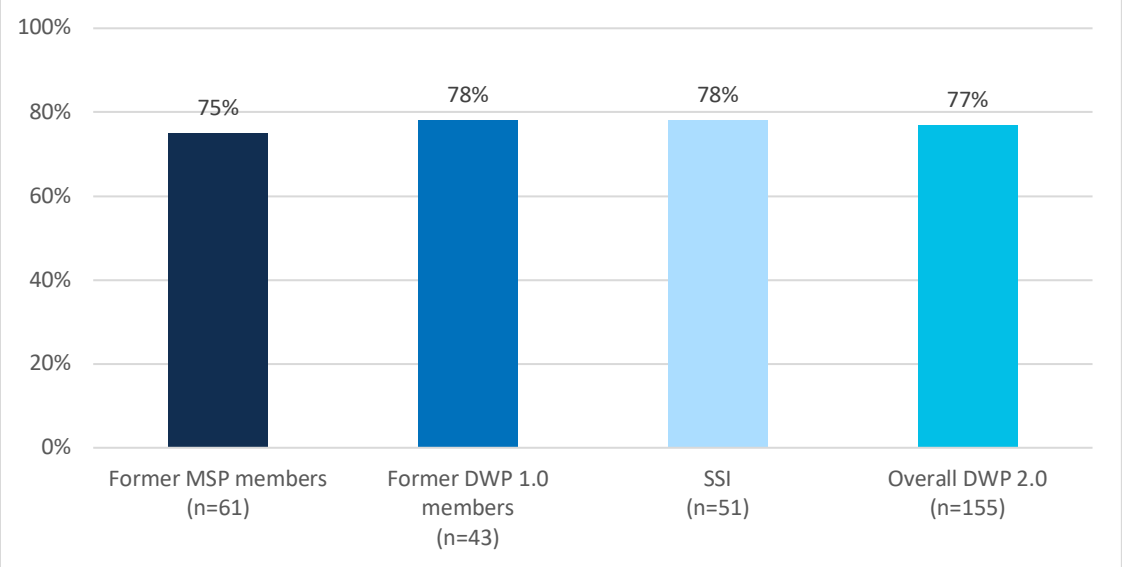
*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Figure 5. Reported waiting times for emergency dental care in a dental office, 2018 DWP Consumer Survey



Hypothesis 1.4 measures

Figure 6. Care at most recent* ED visit could have been provided in a dentist's office, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Figure 7. Rating (0-10, 10=best) of dental plan, 2018 DWP Consumer Survey

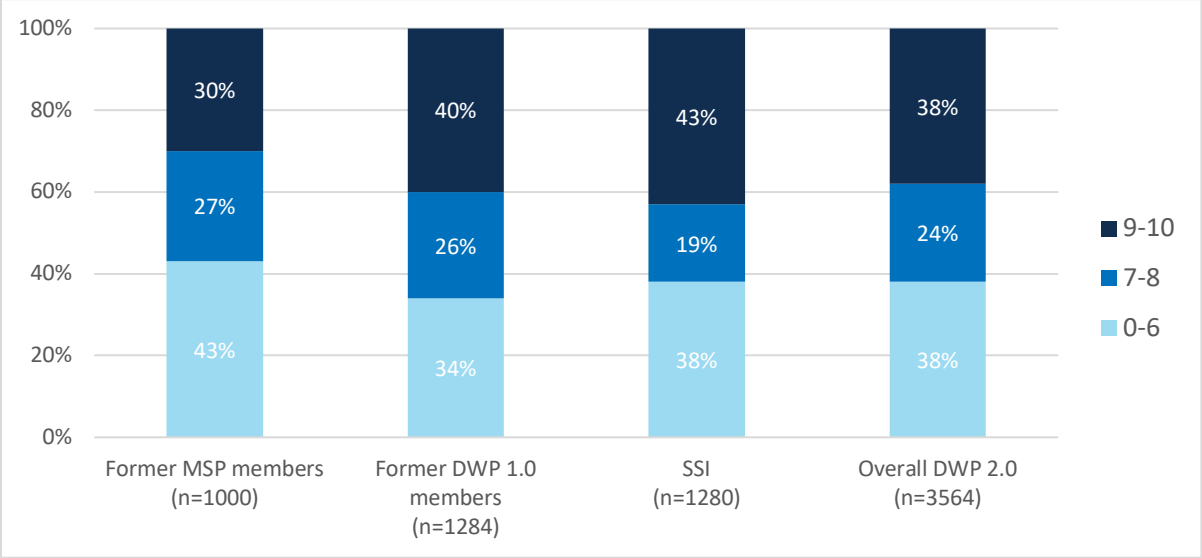


Figure 8. Members' recommendation of the plan to others, 2018 DWP Consumer Survey

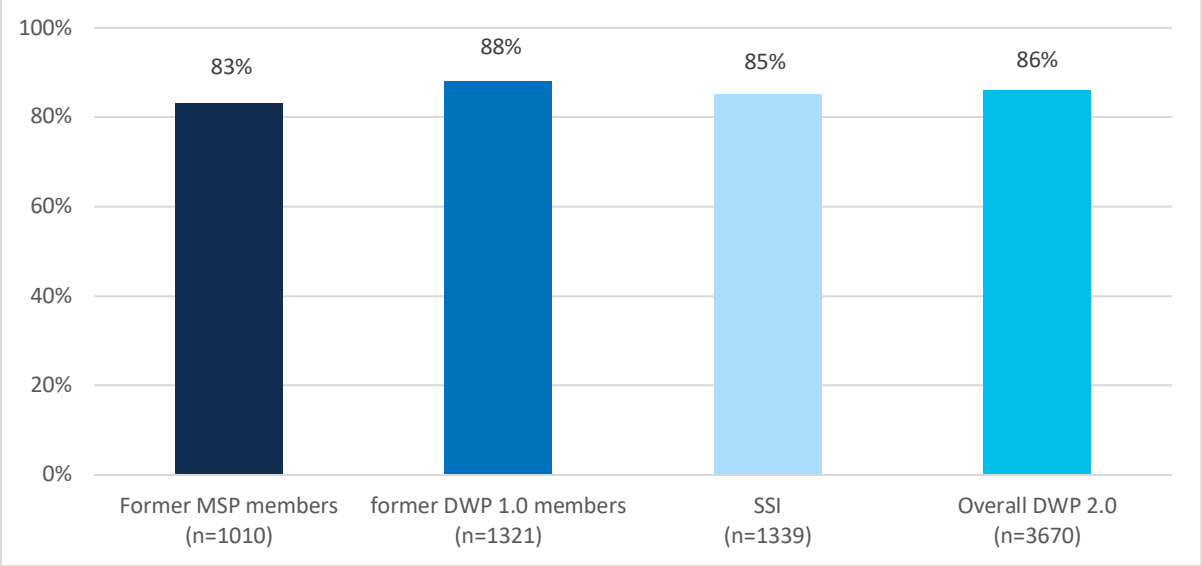


Figure 9. Members' who had to switch regular dentists when they switched plans, 2018 DWP Consumer Survey

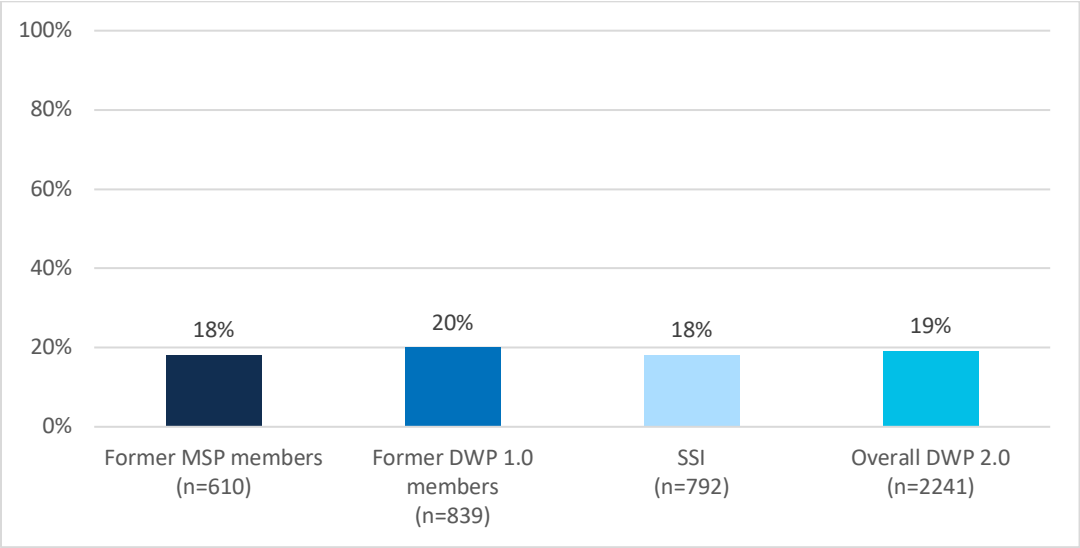


Figure 10. Members' who currently have a regular dentist, 2018 DWP Consumer Survey

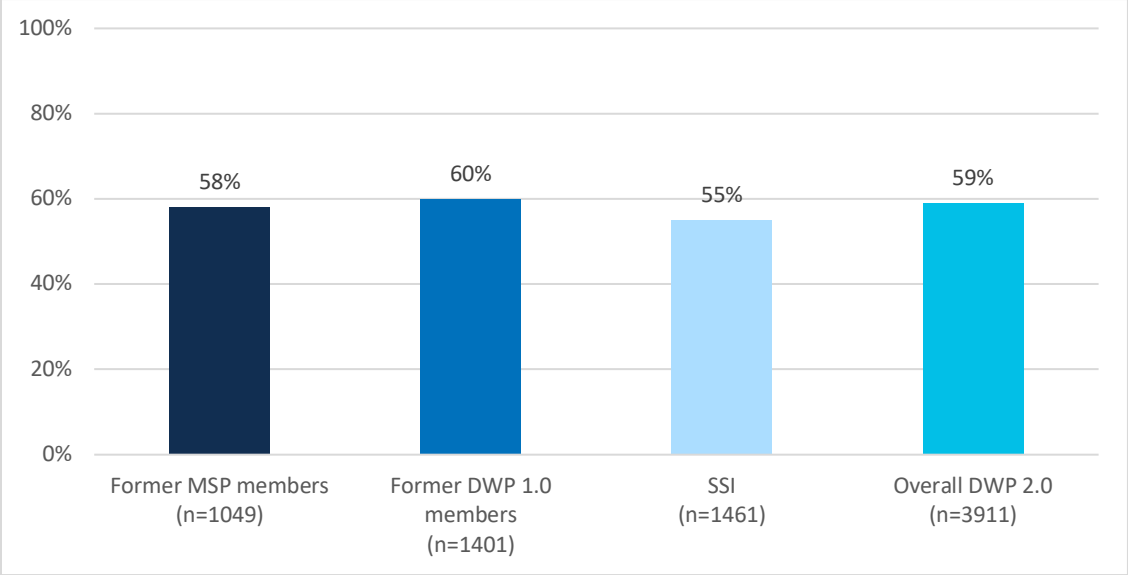
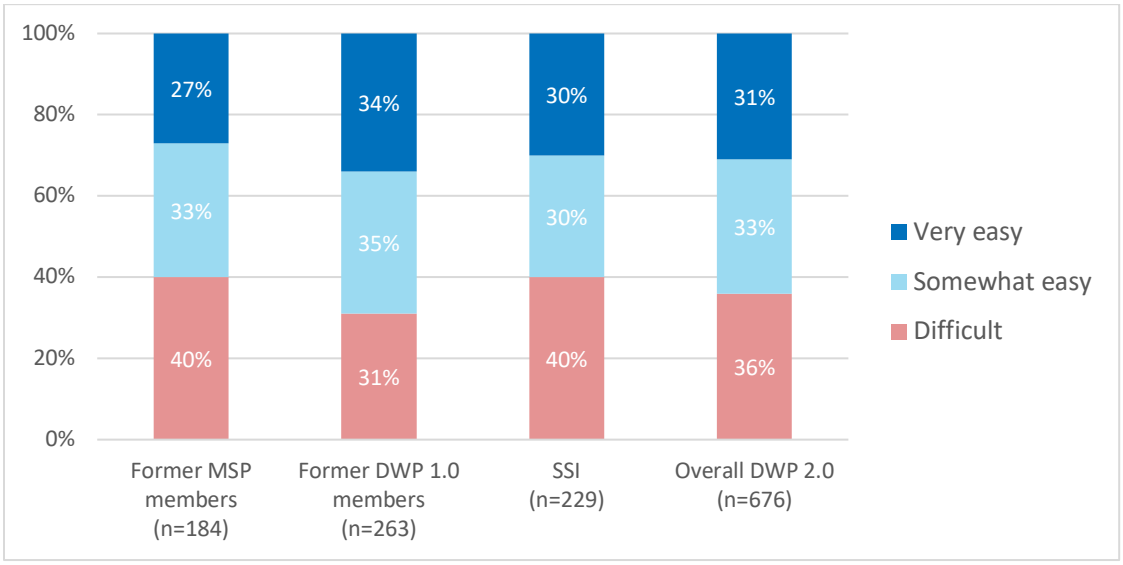


Figure 11. Member experiences finding a new dentist, 2018 DWP Consumer Survey



Hypothesis 1.5 measures

Figure 12. Rating (0-10, 10=best) of regular dentist, 2018 DWP Consumer Survey

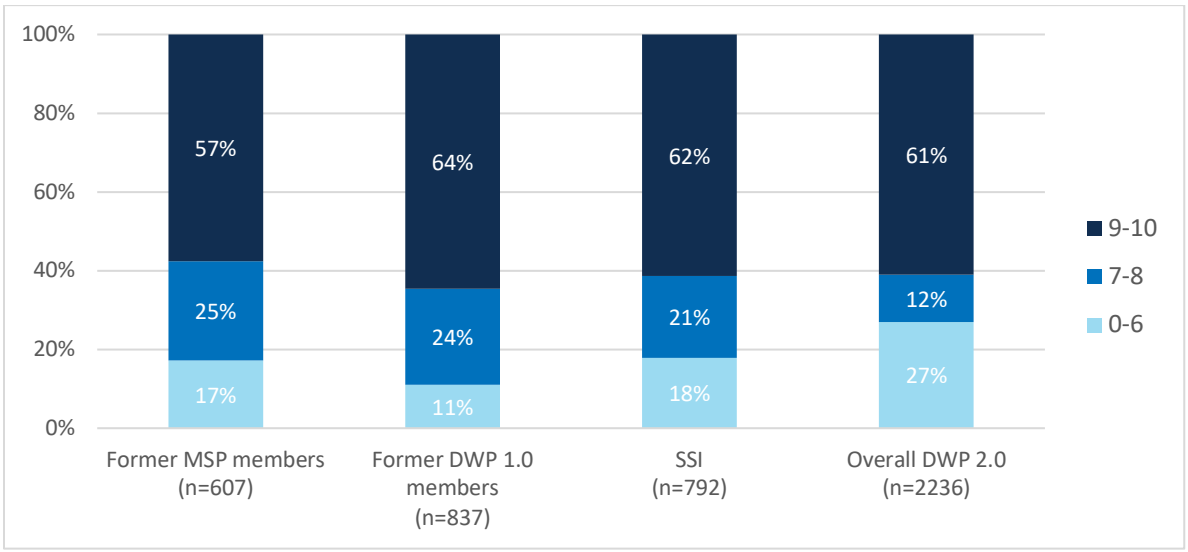
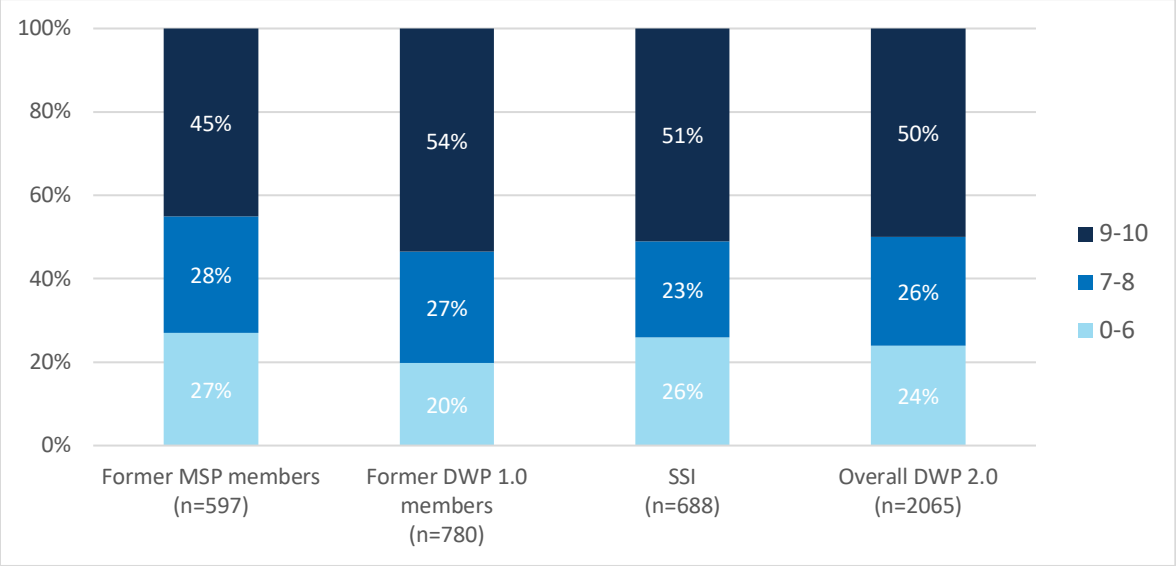


Figure 13. Rating (0-10, 10=best) of all dental care received*, 2018 DWP Consumer Survey



*Reference period is 'Since July 2017' (survey administered in Spring 2018)

Hypothesis 1.6 measures

Figure 14. Member awareness of healthy dental behavior requirements, 2018 DWP Consumer Survey

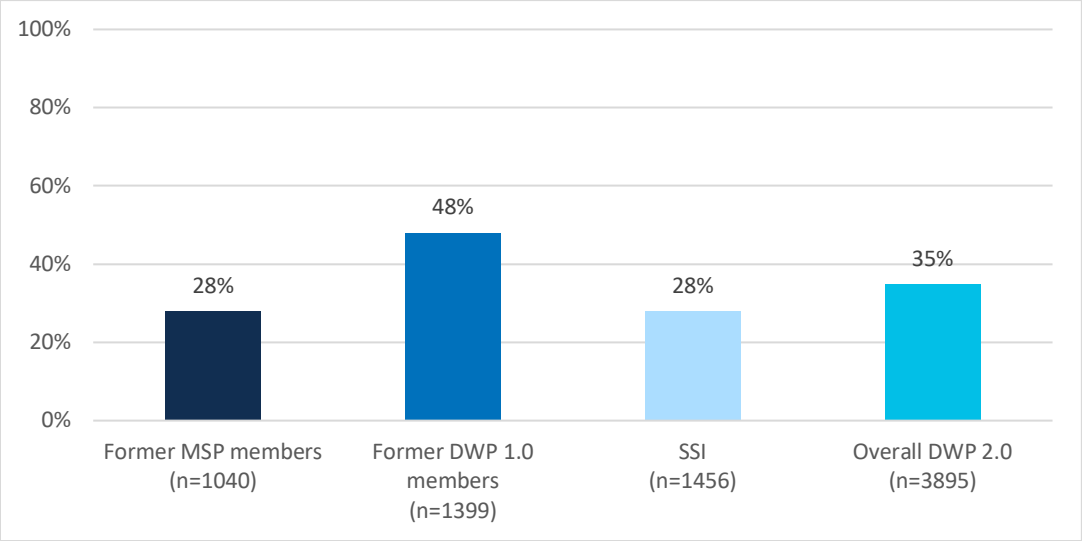


Table 8. Aspects of health dental behavior requirements participants had knowledge of, 2018 DWP Consumer Survey

Known Aspects	Former MSP members (n=671)	Former DWP 1.0 members (n=295)	SSI (n=410)
I need to get a dental check-up every year to keep full benefits	42%	25%	24%
I need to fill out an oral health self-assessment every year to keep full benefits	22%	12%	12%
If I don't complete the two healthy behaviors every year, I will have to pay $3/month to keep full benefits	14%	10%	11%
If I do not pay the $3/month my dental benefits will be limited to reduced services only	11%	7%	8%

Hypothesis 1.7 measures

Figure 15. Member completion of oral health self-assessment, 2018 DWP Consumer Survey

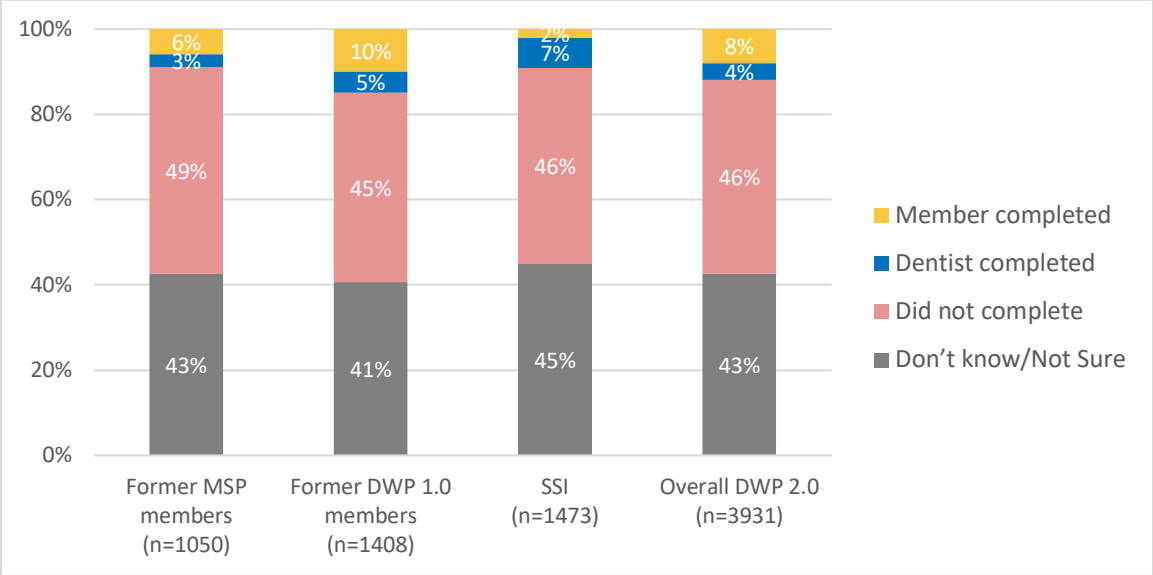


Figure 16. Ease of obtaining an annual checkup or cleaning, 2018 DWP Consumer Survey

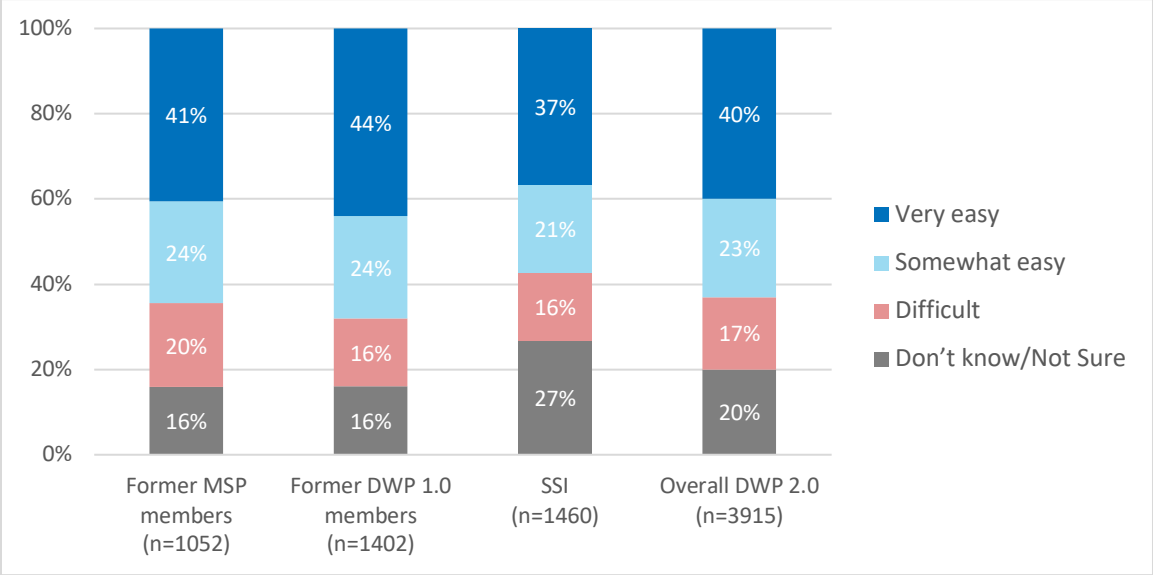


Figure 17. Ability to pay $3 monthly payment to keep full dental benefits, 2018 DWP Consumer Survey

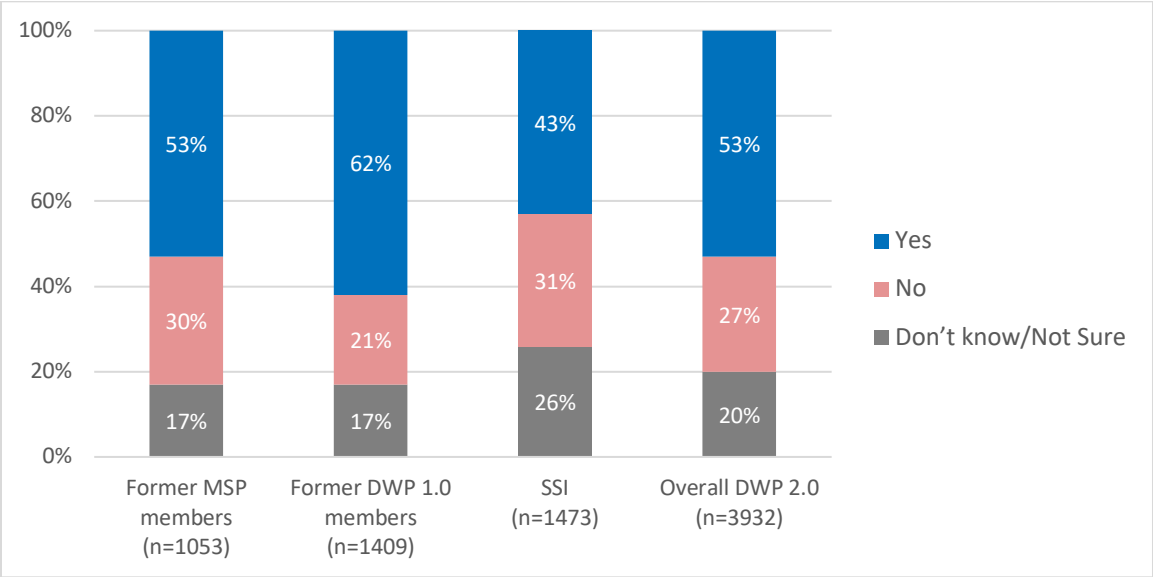


Figure 18. Attitude toward the healthy behavior requirements, 2018 DWP Consumer Survey

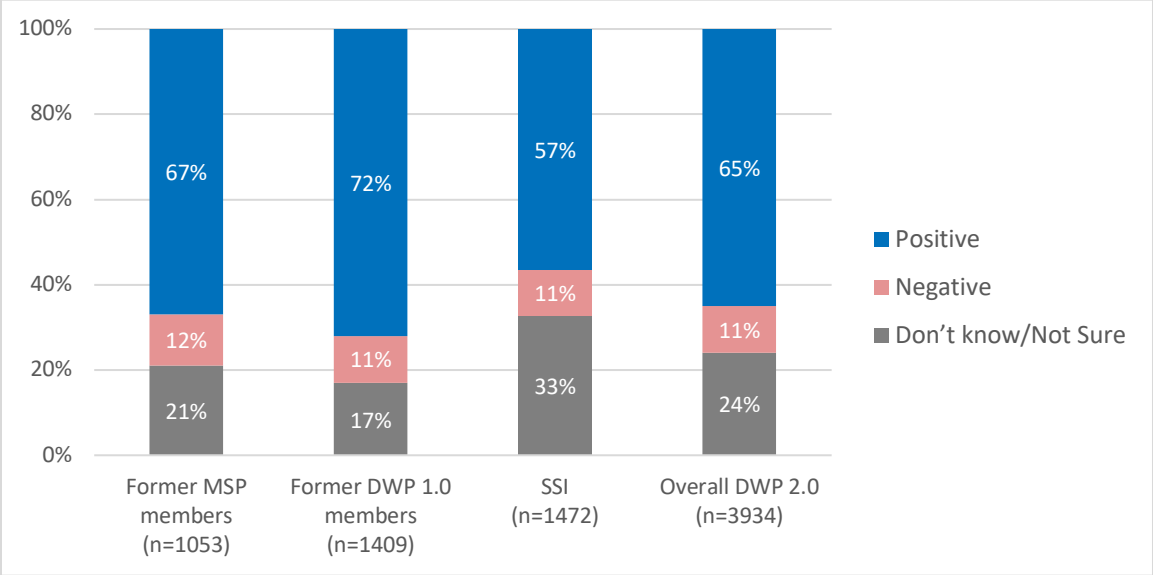


Figure 19. Members reported paying out-of-pocket for any dental service, 2018 DWP Consumer Survey

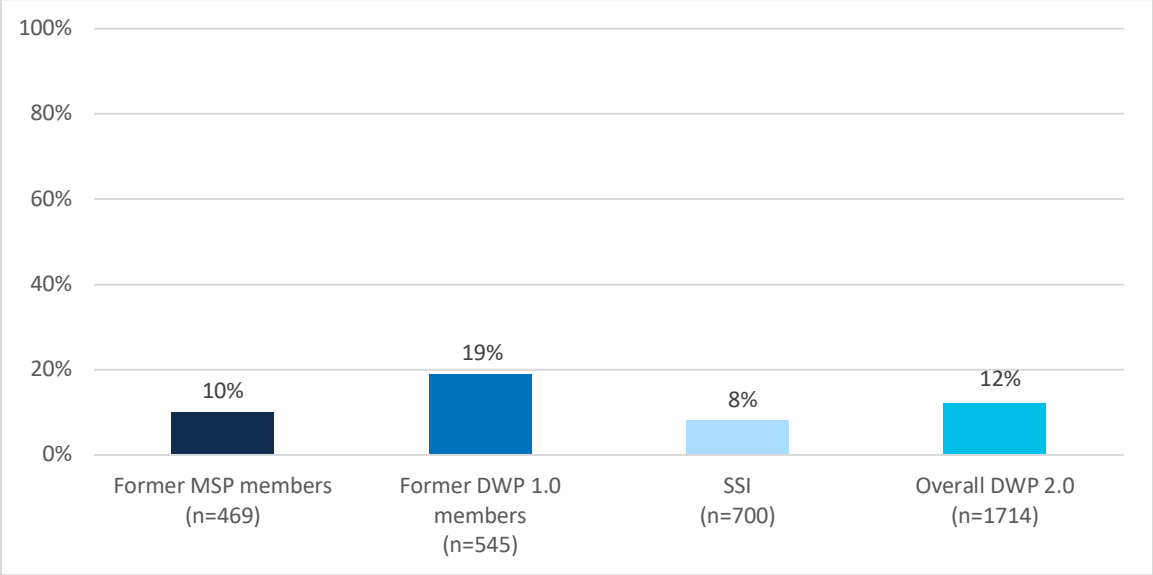
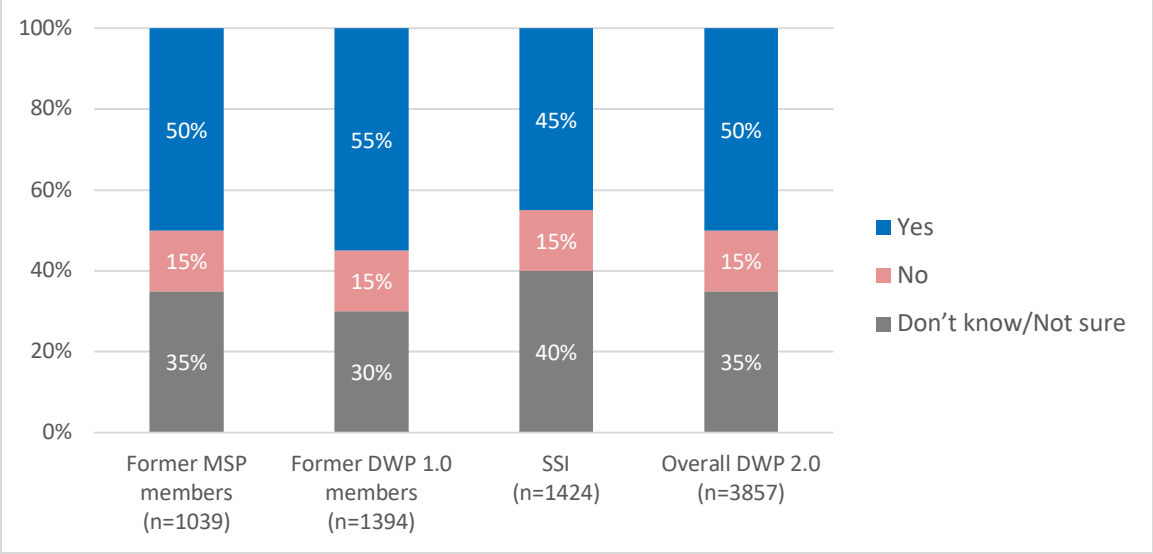


Figure 20. Current dental plan has covered needed dental care, DWP and Medicaid members reporting a recent* need for dental care, 2018 DWP Consumer Survey



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Table 9. Needed dental services not covered by dental plan, 2018 Consumer Surveys

Type of care needed	Former MSP members (n=235)	Former DWP 1.0 members (n=293)	SSI (n=333)
Fillings	17%	22%	16%
Crowns/Caps	19%	22%	14%
Tooth replacements, such as bridges or partial dentures	28%	27%	17%
Checkup and cleaning	26%	34%	29%
Root canal or other emergency dental care	15%	12%	11%
Extractions	21%	24%	21%
Full dentures	17%	21%	38%

Evaluation Question 3 - What are the effects of the benefit structure – including healthy behavior requirements, cost sharing, and reduced benefits – on DWP member outcomes?

Hypothesis 3.1 measures

Figure 21. Self-reported oral health status, 2018 DWP Consumer Survey

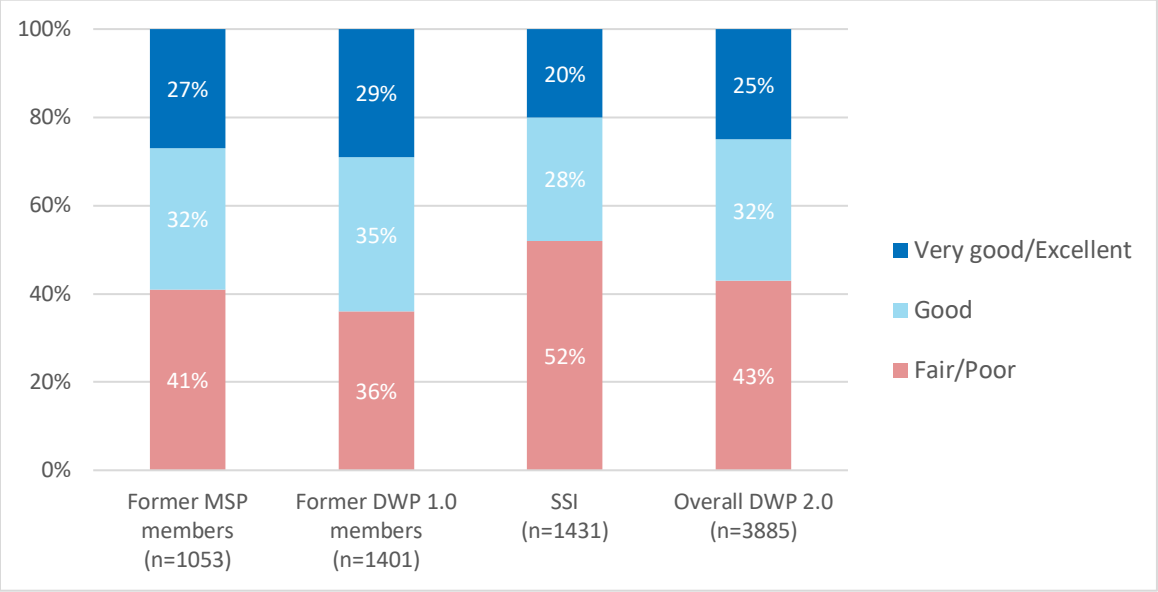
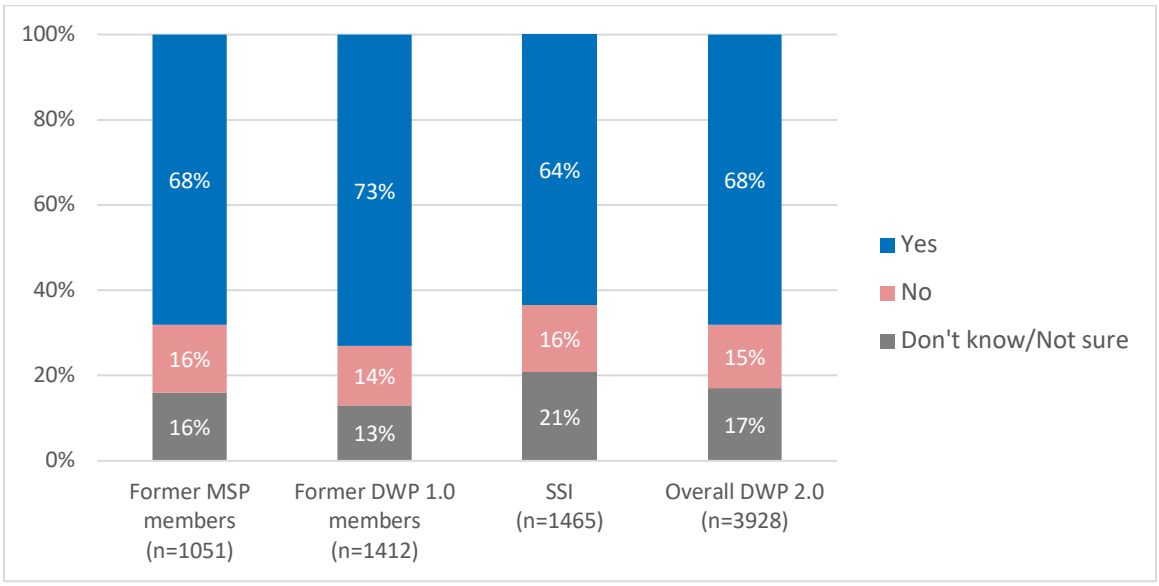


Figure 22. Member perceived influence of healthy dental behavior requirements encouraging annual dental visits, 2018 DWP Consumer Survey



Hypothesis 3.4 measures

Figure 23. Member completion of oral health self-assessment, 2018 DWP Consumer Survey

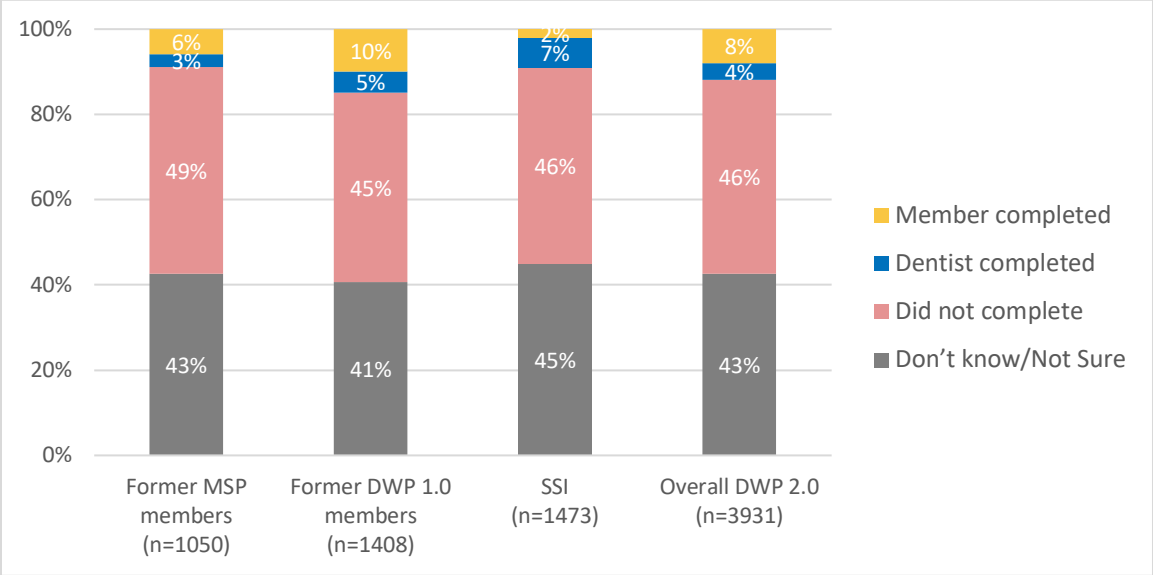
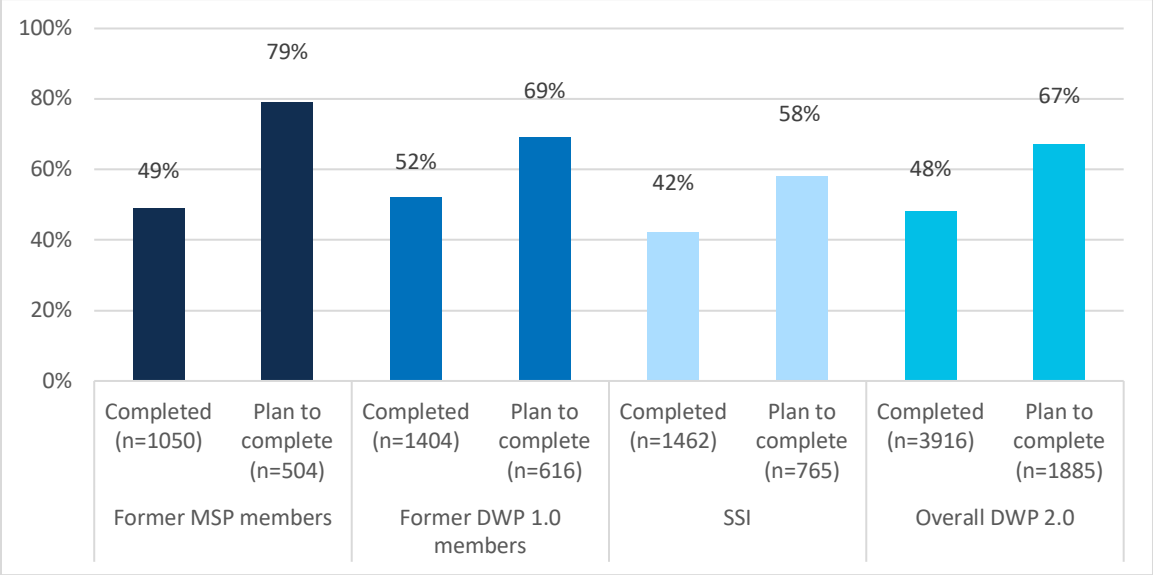


Figure 24. Members' intention to obtain a checkup or cleaning, 2018 DWP Consumer Survey



Evaluation Question 4 - What are the effects of DWP member outreach and referral services?

Hypothesis 4.1 measures

Figure 25. Members who communicated with an insurance representative, 2018 DWP Consumer Survey

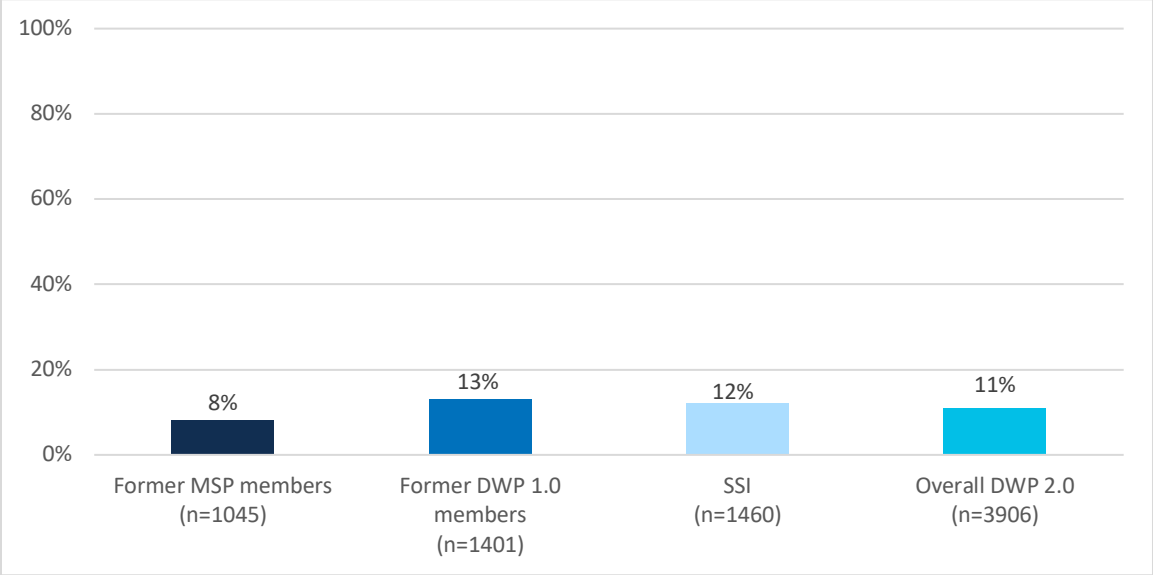
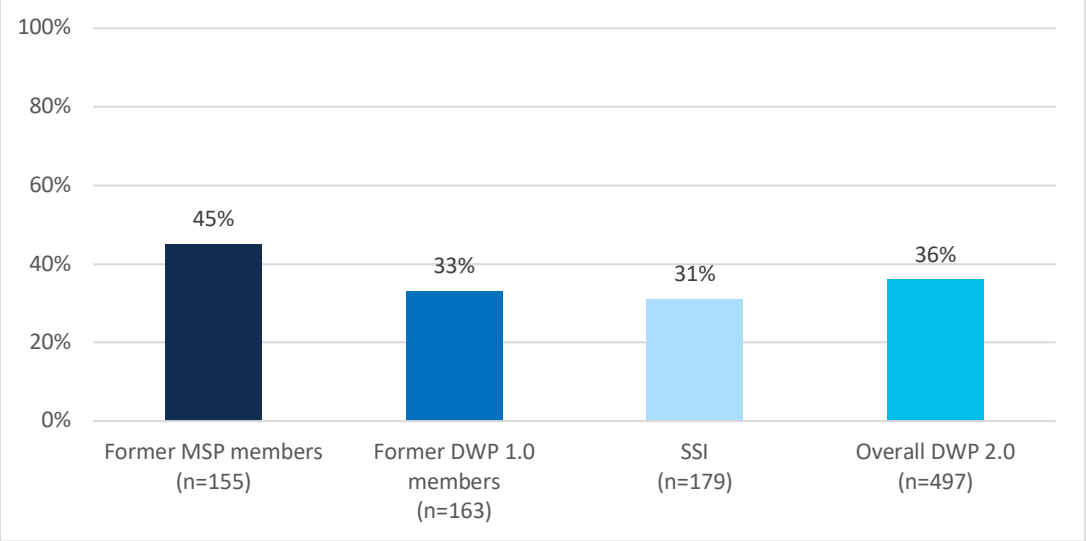


Table 10. Information discussed with insurance representative, 2018 DWP Consumer Survey

Known Aspects	Former MSP members (n=82)	Former DWP 1.0 members (n=167)	SSI (n=152)
Reminder to return for a regular dental checkup	63%	69%	70%
Reminder to complete oral health self-assessment	28%	41%	26%
Finding a DWP dentist	26%	14%	16%
Other	7%	8%	9%

Hypothesis 4.2 measures

Figure 26. Self-reported recent* unmet dental need for specialist care, 2018 DWP Consumer Surveys



*Reference time period is 'Since July 2017' (survey administered in Spring 2018)

Table 11. Unmet need for specialist dental services, 2018 Consumer Surveys

Type of care needed	Former MSP members (n=66)	Former DWP 1.0 members (n=49)	SSI (n=51)
Root canal or other endodontic treatment	32%	33%	41%
Tooth pulled or other oral surgery	41%	51%	45%
Braces or other orthodontic care	-	-	-
Treatment for gum disease or other periodontal care	11%	25%	13%
Dentures, crowns, bridge, or other prosthodontic care	29%	27%	43%
Other treatment	18%	8%	12%

Hypothesis 4.4 measures

Figure 27. Appointment for specialist dental care as soon as wanted, 2018 DWP Consumer Survey

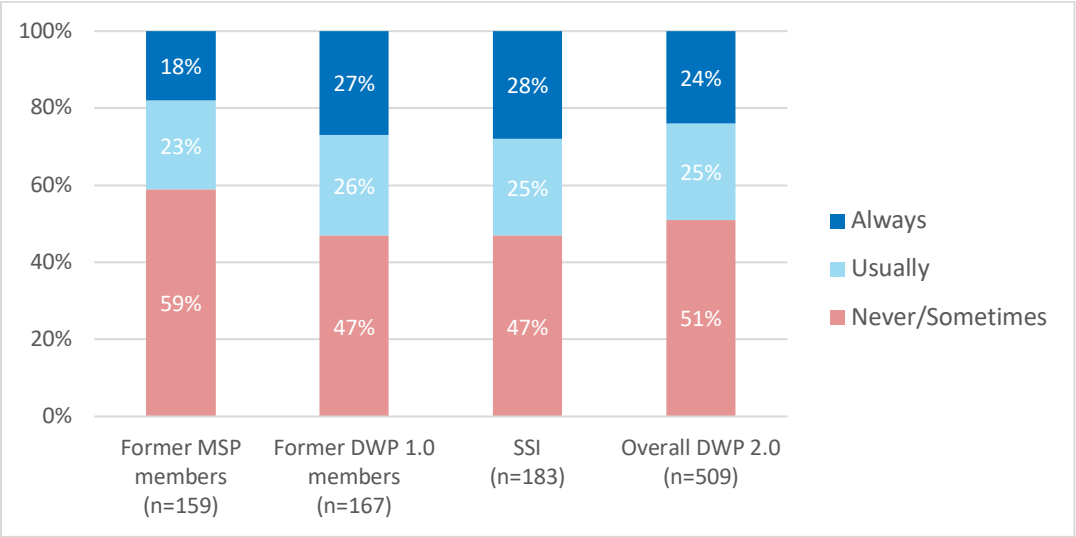


Figure 28. Appointment for routine dental care as soon as wanted, 2018 DWP Consumer Survey

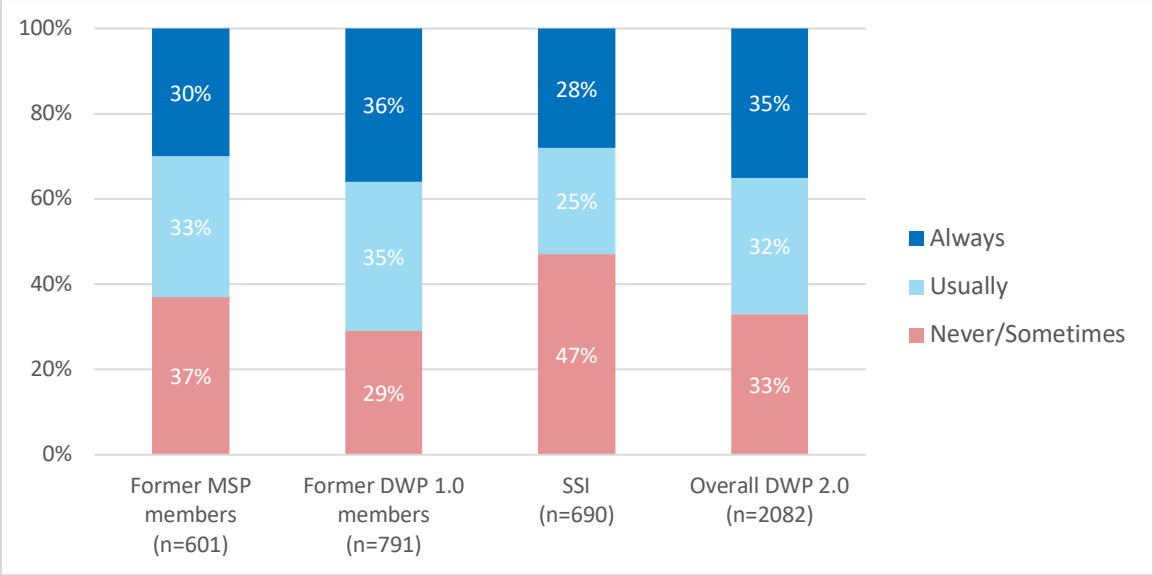


Figure 29. Ease of finding a dentist who accepts DWP/Medicaid, 2018 DWP Consumer Survey